SOUTHERN ILLINOIS UNIVERSITY

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DEPARTMENT OF PLANT, SOIL AND AGRICULTURAL SYSTEMS

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CARBONDALE AGRONOMY RESEARCH CENTER

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GENERAL STATEMENT

These reports are published for the purpose of providing current information to industry collaborators, colleagues at other universities, and other people interested in weed science conducted at Southern Illinois University.

Results from these studies are intended as a source of information on the performance of commercially available and experimental herbicides, safeners, adjuvants, etc. It is not intended to serve as a recommendation or endorsement of specific practices or products. Current recommendations for weed control in Illinois are available from University of Illinois Extension.

Data or information in these reports is not for publication or reproduction without the consent of the authors. If you have any questions or suggestions for improving our data reporting or discover errors, we would appreciate your comments.

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The following firms provided financial support for the conduct of these studies for which we are sincerely grateful. Without this support, it would be impossible to conduct a meaningful program in weed control or other aspects of crop production.

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Bayer CropScience

Cheminova

Croda

Crop Production Services/ Loveland

DeKalb

Dow AgroSciences

DuPont Agr. Products

Exacto

FMC Corp.

Helena Chemical Co.

Illinois Soybean Association (ISA)

Makhteshim Agan (MANA)

Monsanto

NovaSource

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Pioneer Hi-Bred International

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Syngenta

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Valent U.S.A.

Winfield Solutions

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Adjuvant Studies, Corn or Soybean

Southern Illinois University

Glyphosate Tank-Mixture Adjuvant Trial in Soybean - United Suppliers.

Trial ID: 12-11B-E80
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-29-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Compare experimental adjuvants for weed control activity
and crop response.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 5-29-12
Planting Method: SEEDED Seeded **Rate, Unit:** 75 LB/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** ZEAMX - Zea mays L.
Common Name: corn, volunteer
Description: RR2/LL

Pest 2 Type: W **Code:** IPOSS
Common Name: morningglory, species
Description: Mixture of IPOHE and IPOLA

Pest 3 Type: W **Code:** ABUTH - Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 4 Type: W **Code:** AMBTR - Ambrosia trifida L.
Common Name: ragweed, giant

Pest 5 Type: W **Code:** SETFA - Setaria faberi Herrm.
Common Name: foxtail, giant

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 25 FT
Plot Area, Unit: 250 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 100 LB/A

Soil Description

% OM: 1.9 **Texture:** SIL SILT LOAM
pH: 6.8 **Soil Name:** BETHALTO
CEC: 11

Additional Measured Elements

Element	Quantity	Unit
P1	84	LB/A
K	353	LB/A

Glyphosate Tank-Mixture Adjuvant Trial in Soybean - United Suppliers.

Trial ID: 12-11B-E80
Location: Belleville Res. Center
Investigator: Bryan Young

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Application Description

	A
Application Date:	6-22-12
Time of Day:	9:00
Application Method:	Spray
Application Timing:	3-4"W
Application Placement:	BROFOL
Applied By:	LAH
Air Temperature, Unit:	79 F
% Relative Humidity:	54
Wind Velocity, Unit:	5 MPH
Wind Direction:	N
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	76 F
Soil Moisture:	BELNOR
% Cloud Cover:	20
Next Rain Occurred On:	7-8-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	V2
Stage Majority, Percent:	V2
Stage Minimum, Percent:	V2
Height, Unit:	8 IN
Height Minimum, Maximum:	5 8

Glyphosate Tank-Mixture Adjuvant Trial in Soybean - United Suppliers.

Trial ID: 12-11B-E80
Location: Belleville Res. Center
Investigator: Bryan Young

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ZEAMX W DESC
Stage Majority, Percent:	5
Stage Minimum, Percent:	5
Stage Maximum, Percent:	5
Height, Unit:	15 IN
Height Minimum, Maximum:	10 15
Density, Unit:	0.5 FT2
Pest 2 Code, Type, Scale:	IPOSS W DESC
Stage Majority, Percent:	2
Stage Minimum, Percent:	Coty
Stage Maximum, Percent:	8
Height, Unit:	2 IN
Height Minimum, Maximum:	0.5 4
Density, Unit:	5 FT2
Pest 3 Code, Type, Scale:	ABUTH W DESC
Stage Majority, Percent:	3
Stage Minimum, Percent:	Coty
Stage Maximum, Percent:	6
Height, Unit:	3 IN
Height Minimum, Maximum:	0.25 4
Pest 4 Code, Type, Scale:	AMBTR W DESC
Stage Majority, Percent:	4
Stage Minimum, Percent:	4
Stage Maximum, Percent:	8
Height, Unit:	4 IN
Height Minimum, Maximum:	2 6
Density, Unit:	1 FT2
Pest 5 Code, Type, Scale:	SETFA W DESC
Stage Majority, Percent:	3
Stage Minimum, Percent:	2
Stage Maximum, Percent:	5
Height, Unit:	4 IN
Height Minimum, Maximum:	2 6
Density, Unit:	1 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	TT
Nozzle Size:	110015
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	10 GPA

Glyphosate Tank-Mixture Adjuvant Trial in Soybean - United Suppliers.

Trial ID: 12-11B-E80
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-29-12 Injury Percent 7 DA-A	GLXMA 7-6-12 Injury Percent 14 DA-A	ZEAMX 6-29-12 Control Percent 7 DA-A	ZEAMX 7-6-12 Control Percent 14 DA-A	ZEAMX 7-20-12 Control Percent 28 DA-A
1	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	0 d	0 b	60 b	86 ab	77 b
	SELECT MAX	0.97	EC	0.0455	lb ai/a	6	fl oz/a	3-4"W	A					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A					
	CHEMSURF 80	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A					
2	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	0 d	0 b	63 ab	88 a	83 ab
	SELECT MAX	0.97	EC	0.0455	lb ai/a	6	fl oz/a	3-4"W	A					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A					
	USIEX2442012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A					
3	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	0 d	0 b	62 ab	85 b	82 ab
	SELECT MAX	0.97	EC	0.0455	lb ai/a	6	fl oz/a	3-4"W	A					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A					
	USIEX2652012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A					
4	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	0 d	0 b	59 b	88 a	79 b
	SELECT MAX	0.97	EC	0.0455	lb ai/a	6	fl oz/a	3-4"W	A					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A					
	USIEX2882012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A					
5	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	0 d	0 b	57 b	86 ab	84 ab
	SELECT MAX	0.97	EC	0.0455	lb ai/a	6	fl oz/a	3-4"W	A					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A					
	USIEX2142012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A					
6	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	0 d	0 b	63 ab	85 b	84 ab
	SELECT MAX	0.97	EC	0.0455	lb ai/a	6	fl oz/a	3-4"W	A					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A					
	BETWEEN	100	SL	0.5	% v/v	4	pt/100 gal	3-4"W	A					
7	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	0 d	0 b	63 ab	88 a	87 a
	SELECT MAX	0.97	EC	0.0455	lb ai/a	6	fl oz/a	3-4"W	A					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A					
8	NONTREATED									0 d	0 b	0 e	0 g	0 d
9	FLEXSTAR GT 3.5	2.82	SL	0.617	lb ae/a	1.75	pt/a	3-4"W	A	5 c	4 a	22 d	20 e	0 d
	CLETHODIM	2	EC	0.047	lb ai/a	3	fl oz/a	3-4"W	A					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A					
	CHEMSURF 80	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A					
10	FLEXSTAR GT 3.5	2.82	SL	0.617	lb ae/a	1.75	pt/a	3-4"W	A	6 bc	3 a	26 d	22 e	0 d
	CLETHODIM	2	EC	0.047	lb ai/a	3	fl oz/a	3-4"W	A					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A					
	USIEX2442012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A					
11	FLEXSTAR GT 3.5	2.82	SL	0.617	lb ae/a	1.75	pt/a	3-4"W	A	7 ab	4 a	23 d	24 d	0 d
	CLETHODIM	2	EC	0.047	lb ai/a	3	fl oz/a	3-4"W	A					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A					
	USIEX2652012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A					
12	FLEXSTAR GT 3.5	2.82	SL	0.617	lb ae/a	1.75	pt/a	3-4"W	A	5 c	0 b	20 d	17 f	0 d
	CLETHODIM	2	EC	0.047	lb ai/a	3	fl oz/a	3-4"W	A					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A					
	USIEX2882012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A					
13	FLEXSTAR GT 3.5	2.82	SL	0.617	lb ae/a	1.75	pt/a	3-4"W	A	5 c	3 a	40 c	20 e	0 d
	CLETHODIM	2	EC	0.047	lb ai/a	3	fl oz/a	3-4"W	A					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A					
	USIEX2142012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A					

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Glyphosate Tank-Mixture Adjuvant Trial in Soybean - United Suppliers.

Trial ID: 12-11B-E80
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-29-12 Injury Percent 7 DA-A	GLXMA 7-6-12 Injury Percent 14 DA-A	ZEAMX 6-29-12 Control Percent 7 DA-A	ZEAMX 7-6-12 Control Percent 14 DA-A	ZEAMX 7-20-12 Control Percent 28 DA-A
14	FLEXSTAR GT 3.5	2.82	SL	0.617	lb ae/a	1.75	pt/a	3-4"W	A	8 a	3 a	72 a	70 c	40 c
	CLETHODIM	2	EC	0.047	lb ai/a	3	fl oz/a	3-4"W	A					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A					
	BETWEEN	100	SL	0.5	% v/v	4	pt/100 gal	3-4"W	A					
15	FLEXSTAR GT 3.5	2.82	SL	0.617	lb ae/a	1.75	pt/a	3-4"W	A	5 c	1 b	22 d	22 e	0 d
	CLETHODIM	2	EC	0.047	lb ai/a	3	fl oz/a	3-4"W	A					
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A					
16	NONTREATED									0 d	0 b	0 e	0 g	0 d
LSD (P=.05)										1.5	1.6	12.2	2.4	7.3
Standard Deviation										0.9	0.9	7.3	1.5	4.4
CV										35.08	81.18	17.96	2.92	11.41
Replicate F										0.175	1.180	0.019	0.303	5.874
Replicate Prob(F)										0.8405	0.3212	0.9812	0.7412	0.0070
Treatment F										35.952	9.552	33.353	1871.425	262.740
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001

Glyphosate Tank-Mixture Adjuvant Trial in Soybean - United Suppliers.

Trial ID: 12-11B-E80
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	IPOSS 6-29-12 Control Percent 7 DA-A	IPOSS 7-6-12 Control Percent 14 DA-A	IPOSS 7-20-12 Control Percent 28 DA-A	ABUTH 6-29-12 Control Percent 7 DA-A	ABUTH 7-6-12 Control Percent 14 DA-A	ABUTH 7-20-12 Control Percent 28 DA-A
1	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	60 ef	78 bcd	86 ab	66 g	90 a-d	93 abc
	SELECT MAX	0.97	EC	0.0455	lb ai/a	6	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	CHEMSURF 80	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
2	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	62 ef	72 def	83 ab	75 ef	87 cd	88 c
	SELECT MAX	0.97	EC	0.0455	lb ai/a	6	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2442012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
3	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	63 e	76 b-e	84 ab	72 fg	87 bcd	92 abc
	SELECT MAX	0.97	EC	0.0455	lb ai/a	6	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2652012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
4	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	65 de	78 bcd	87 ab	73 ef	88 a-d	90 bc
	SELECT MAX	0.97	EC	0.0455	lb ai/a	6	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2882012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
5	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	60 ef	70 ef	86 ab	65 g	85 d	94 abc
	SELECT MAX	0.97	EC	0.0455	lb ai/a	6	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2142012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
6	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	62 ef	72 def	81 b	77 def	87 bcd	92 abc
	SELECT MAX	0.97	EC	0.0455	lb ai/a	6	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	BETWEEN	100	SL	0.5	% v/v	4	pt/100 gal	3-4"W	A						
7	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	57 f	68 f	82 b	72 fg	89 a-d	92 abc
	SELECT MAX	0.97	EC	0.0455	lb ai/a	6	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
8	NONTREATED									0 g	0 g	0 c	0 h	0 e	0 d
9	FLEXSTAR GT 3.5	2.82	SL	0.617	lb ae/a	1.75	pt/a	3-4"W	A	72 bc	74 c-f	87 ab	86 bc	93 abc	95 ab
	CLETHODIM	2	EC	0.047	lb ai/a	3	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	CHEMSURF 80	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
10	FLEXSTAR GT 3.5	2.82	SL	0.617	lb ae/a	1.75	pt/a	3-4"W	A	73 bc	80 abc	91 a	88 ab	90 a-d	96 a
	CLETHODIM	2	EC	0.047	lb ai/a	3	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2442012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
11	FLEXSTAR GT 3.5	2.82	SL	0.617	lb ae/a	1.75	pt/a	3-4"W	A	77 b	81 ab	87 ab	87 b	94 ab	97 a
	CLETHODIM	2	EC	0.047	lb ai/a	3	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2652012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
12	FLEXSTAR GT 3.5	2.82	SL	0.617	lb ae/a	1.75	pt/a	3-4"W	A	71 bcd	76 b-e	83 ab	80 cde	93 abc	94 abc
	CLETHODIM	2	EC	0.047	lb ai/a	3	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2882012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
13	FLEXSTAR GT 3.5	2.82	SL	0.617	lb ae/a	1.75	pt/a	3-4"W	A	70 cd	77 b-e	88 ab	90 ab	94 abc	98 a
	CLETHODIM	2	EC	0.047	lb ai/a	3	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2142012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						

Southern Illinois University

Glyphosate Tank-Mixture Adjuvant Trial in Soybean - United Suppliers.

Trial ID: 12-11B-E80
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	IPOSS	IPOSS	IPOSS	ABUTH	ABUTH	ABUTH
	Pest Code									IPOSS	IPOSS	IPOSS	ABUTH	ABUTH	ABUTH
	Crop Code														
	Rating Date									6-29-12	7-6-12	7-20-12	6-29-12	7-6-12	7-20-12
	Rating Type									Control	Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
	Rating Timing														
	Trt-Eval Interval									7 DA-A	14 DA-A	28 DA-A	7 DA-A	14 DA-A	28 DA-A
14	FLEXSTAR GT 3.5	2.82	SL	0.617	lb ae/a	1.75	pt/a	3-4"W	A	83 a	86 a	90 a	95 a	95 a	94 abc
	CLETHODIM	2	EC	0.047	lb ai/a	3	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	BETWEEN	100	SL	0.5	% v/v	4	pt/100 gal	3-4"W	A						
15	FLEXSTAR GT 3.5	2.82	SL	0.617	lb ae/a	1.75	pt/a	3-4"W	A	73 bc	72 def	85 ab	83 bcd	91 a-d	96 a
	CLETHODIM	2	EC	0.047	lb ai/a	3	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
16	NONTREATED									0 g	0 g	0 c	0 h	0 e	0 d
	LSD (P=.05)									6.3	6.7	7.9	7.0	7.4	6.2
	Standard Deviation									3.8	4.0	4.7	4.2	4.4	3.7
	CV									6.39	6.05	6.33	6.04	5.63	4.5
	Replicate F									0.508	2.575	3.051	0.476	0.117	1.947
	Replicate Prob(F)									0.6068	0.0929	0.0622	0.6258	0.8900	0.1609
	Treatment F									122.640	128.773	115.184	138.338	145.630	226.621
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Glyphosate Tank-Mixture Adjuvant Trial in Soybean - United Suppliers.

Trial ID: 12-11B-E80
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 6-29-12 Control Percent 7 DA-A	AMBTR 7-6-12 Control Percent 14 DA-A	AMBTR 7-20-12 Control Percent 28 DA-A	SETFA 6-29-12 Control Percent 7 DA-A	SETFA 7-6-12 Control Percent 14 DA-A	SETFA 7-20-12 Control Percent 28 DA-A
1	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	94 abc	90 cd	96 ab	99 a	99 a	99 a
	SELECT MAX	0.97	EC	0.0455	lb ai/a	6	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	CHEMSURF 80	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
2	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	94 abc	92 bcd	96 ab	99 a	99 a	99 a
	SELECT MAX	0.97	EC	0.0455	lb ai/a	6	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2442012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
3	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	97 a	99 a	99 a	99 a	99 a	99 a
	SELECT MAX	0.97	EC	0.0455	lb ai/a	6	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2652012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
4	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	96 a	99 a	99 a	98 a	99 a	98 b
	SELECT MAX	0.97	EC	0.0455	lb ai/a	6	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2882012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
5	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	86 cde	95 a-d	97 ab	99 a	99 a	99 a
	SELECT MAX	0.97	EC	0.0455	lb ai/a	6	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2142012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
6	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	95 a	96 abc	98 a	99 a	99 a	99 a
	SELECT MAX	0.97	EC	0.0455	lb ai/a	6	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	BETWEEN	100	SL	0.5	% v/v	4	pt/100 gal	3-4"W	A						
7	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	95 ab	96 abc	98 ab	99 a	99 a	99 a
	SELECT MAX	0.97	EC	0.0455	lb ai/a	6	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
8	NONTREATED									0 g	0 e	0 c	0 c	0 c	0 c
9	FLEXSTAR GT 3.5	2.82	SL	0.617	lb ae/a	1.75	pt/a	3-4"W	A	82 def	89 d	93 b	99 a	98 b	99 a
	CLETHODIM	2	EC	0.047	lb ai/a	3	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	CHEMSURF 80	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
10	FLEXSTAR GT 3.5	2.82	SL	0.617	lb ae/a	1.75	pt/a	3-4"W	A	89 a-d	95 a-d	96 ab	99 a	99 a	99 a
	CLETHODIM	2	EC	0.047	lb ai/a	3	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2442012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
11	FLEXSTAR GT 3.5	2.82	SL	0.617	lb ae/a	1.75	pt/a	3-4"W	A	80 ef	93 a-d	96 ab	99 a	99 a	99 a
	CLETHODIM	2	EC	0.047	lb ai/a	3	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2652012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
12	FLEXSTAR GT 3.5	2.82	SL	0.617	lb ae/a	1.75	pt/a	3-4"W	A	80 ef	91 bcd	95 ab	99 a	99 a	99 a
	CLETHODIM	2	EC	0.047	lb ai/a	3	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2882012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
13	FLEXSTAR GT 3.5	2.82	SL	0.617	lb ae/a	1.75	pt/a	3-4"W	A	77 f	90 cd	96 ab	98 a	99 a	99 a
	CLETHODIM	2	EC	0.047	lb ai/a	3	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2142012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						

Southern Illinois University

Glyphosate Tank-Mixture Adjuvant Trial in Soybean - United Suppliers.

Trial ID: 12-11B-E80
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 6-29-12 Control Percent 7 DA-A	AMBTR 7-6-12 Control Percent 14 DA-A	AMBTR 7-20-12 Control Percent 28 DA-A	SETFA 6-29-12 Control Percent 7 DA-A	SETFA 7-6-12 Control Percent 14 DA-A	SETFA 7-20-12 Control Percent 28 DA-A
14	FLEXSTAR GT 3.5	2.82	SL	0.617	lb ae/a	1.75	pt/a	3-4"W	A	91 abc	96 ab	95 ab	99 a	99 a	99 a
	CLETHODIM	2	EC	0.047	lb ai/a	3	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	BETWEEN	100	SL	0.5	% v/v	4	pt/100 gal	3-4"W	A						
15	FLEXSTAR GT 3.5	2.82	SL	0.617	lb ae/a	1.75	pt/a	3-4"W	A	86 b-e	91 bcd	95 ab	97 b	99 a	99 a
	CLETHODIM	2	EC	0.047	lb ai/a	3	fl oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
16	NONTREATED									0 g	0 e	0 c	0 c	0 c	0 c
LSD (P=.05)										8.6	6.1	5.0	1.1	0.5	0.5
Standard Deviation										5.1	3.6	3.0	0.6	0.3	0.3
CV										6.56	4.41	3.55	0.74	0.33	0.33
Replicate F										1.355	1.229	0.362	1.438	1.000	1.000
Replicate Prob(F)										0.2764	0.3097	0.6996	0.2532	0.3798	0.3798
Treatment F										110.713	237.490	363.781	8419.782	41125.606	41125.606
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Glyphosate Tank-Mixture Adjuvant Trial in Soybean - United Suppliers.

Trial ID: 12-11B-E80
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: United Suppliers.
2. Ratings: CI/WC at 7, 14, and 28 DAT.
3. Plant volunteer corn (DKC 61-06 RR2/LL) split rows in planter.
4. Rainfall following the 3-4"W application was 0.28 inch 16 days later, and 0.15 inch 37 days later.
5. Missing data for some weeds in some plots was due to low populations.
6. IPOSS = Morningglory species including IPOHE (ivyleaf morningglory) and IPOLA (pitted morningglory).
7. Not harvested.

Glyphosate Tank-Mixture Adjuvant Trial in Corn - United Suppliers.

Trial ID: 12-50W-N100
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-22-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Compare experimental adjuvants for weed control activity
and crop response.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 61-06 **Description:** RR2/LL
BBCH Scale: BCOR **Planting Date:** 5-22-12
Planting Method: SEEDED Seeded **Rate, Unit:** 28000 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** SETFA - Setaria faberi Herrm.
Common Name: foxtail, giant

Pest 2 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 3 Type: W **Code:** ABUTH - Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 4 Type: W **Code:** AMBTR - Ambrosia trifida L.
Common Name: ragweed, giant

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 27 FT
Plot Area, Unit: 270 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 150 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 1.7 **Texture:** SIL SILT LOAM
pH: 6.1 **Soil Name:** PIERRON
CEC: 9

Additional Measured Elements

Element	Quantity	Unit
P1	51	LB/A
K	285	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Glyphosate Tank-Mixture Adjuvant Trial in Corn - United Suppliers.

Trial ID: 12-50W-N100
Location: Belleville Res. Center
Investigator: Bryan Young

Application Description

	A
Application Date:	6-11-12
Time of Day:	7:45
Application Method:	Spray
Application Timing:	3-4"W
Application Placement:	BROFOL
Applied By:	LAH
Air Temperature, Unit:	78 F
% Relative Humidity:	82
Wind Velocity, Unit:	4 MPH
Wind Direction:	S
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	73 F
Soil Moisture:	BELNOR
% Cloud Cover:	30
Next Rain Occurred On:	6-11-12

Crop Stage At Each Application

	A	
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	
Stage Scale Used:	DESC	
Stage Majority, Percent:	V5	
Stage Minimum, Percent:	V5	
Stage Maximum, Percent:	V5	
Height, Unit:	17	IN
Height Minimum, Maximum:	12	17

Pest Stage At Each Application

	A	
Pest 1 Code, Type, Scale:	SETFA W DESC	
Stage Majority, Percent:	6	
Stage Minimum, Percent:	3	
Stage Maximum, Percent:	8	
Height, Unit:	4	IN
Height Minimum, Maximum:	4	6
Density, Unit:	1	FT2
Pest 2 Code, Type, Scale:	AMATA W DESC	
Stage Majority, Percent:	6	
Stage Minimum, Percent:	4	
Stage Maximum, Percent:	10	
Height, Unit:	4	IN
Height Minimum, Maximum:	2	6
Density, Unit:	0.1	FT2
Pest 3 Code, Type, Scale:	ABUTH W DESC	
Stage Majority, Percent:	3	
Stage Minimum, Percent:	2	
Stage Maximum, Percent:	5	
Height, Unit:	3	IN
Height Minimum, Maximum:	1	4
Density, Unit:	0.5	FT2
Pest 4 Code, Type, Scale:	AMBTR W DESC	
Stage Majority, Percent:	6	
Stage Minimum, Percent:	4	
Stage Maximum, Percent:	8	
Height, Unit:	4	IN
Height Minimum, Maximum:	2	8
Density, Unit:	1	FT2

Southern Illinois University

Glyphosate Tank-Mixture Adjuvant Trial in Corn - United Suppliers.

Trial ID: 12-50W-N100
Location: Belleville Res. Center
Investigator: Bryan Young

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	TT
Nozzle Size:	110015
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	10 GPA

Glyphosate Tank-Mixture Adjuvant Trial in Corn - United Suppliers.

Trial ID: 12-50W-N100
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 6-18-12 Injury Percent 7 DA-A	ZEAMD 6-25-12 Injury Percent 14 DA-A	ZEAMD 7-9-12 Injury Percent 28 DA-A	SETFA 6-18-12 Control Percent 7 DA-A	SETFA 6-25-12 Control Percent 14 DA-A	SETFA 7-9-12 Control Percent 28 DA-A
1	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	0 a	0 a	0 a	99 a	99 a	97 abc
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	CHEMSURF 80	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
2	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	0 a	0 a	0 a	99 a	98 a	96 abc
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2442012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
3	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	0 a	0 a	0 a	99 a	99 a	97 abc
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2652012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
4	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	0 a	0 a	0 a	93 ab	96 ab	95 bc
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2882012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
5	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	0 a	0 a	0 a	99 a	99 a	98 ab
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2142012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
6	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	0 a	0 a	0 a	89 b	96 ab	95 c
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	BETWEEN	100	SL	0.5	% v/v	4	pt/100 gal	3-4"W	A						
7	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	0 a	0 a	0 a	98 a	98 a	98 ab
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
8	NONTREATED									0 a	0 a	0 a	0 c	0 c	0 d
9	HALEX GT	4.38	CS	1.1	lb ai/a	2	pt/a	3-4"W	A	0 a	0 a	0 a	98 a	98 a	96 abc
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	CHEMSURF 80	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
10	HALEX GT	4.38	CS	1.1	lb ai/a	2	pt/a	3-4"W	A	0 a	0 a	0 a	99 a	99 a	98 a
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2442012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
11	HALEX GT	4.38	CS	1.1	lb ai/a	2	pt/a	3-4"W	A	0 a	0 a	0 a	98 a	99 a	98 ab
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2652012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
12	HALEX GT	4.38	CS	1.1	lb ai/a	2	pt/a	3-4"W	A	0 a	0 a	0 a	99 a	99 a	98 ab
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2882012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
13	HALEX GT	4.38	CS	1.1	lb ai/a	2	pt/a	3-4"W	A	0 a	0 a	0 a	99 a	99 a	97 abc
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2142012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
14	HALEX GT	4.38	CS	1.1	lb ai/a	2	pt/a	3-4"W	A	0 a	0 a	0 a	98 a	98 a	96 abc
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	BETWEEN	100	SL	0.5	% v/v	4	pt/100 gal	3-4"W	A						

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Glyphosate Tank-Mixture Adjuvant Trial in Corn - United Suppliers.

Trial ID: 12-50W-N100
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 6-18-12 Injury Percent 7 DA-A	ZEAMD 6-25-12 Injury Percent 14 DA-A	ZEAMD 7-9-12 Injury Percent 28 DA-A	SETFA 6-18-12 Control Percent 7 DA-A	SETFA 6-25-12 Control Percent 14 DA-A	SETFA 7-9-12 Control Percent 28 DA-A
15	HALEX GT	4.38	CS	1.1	lb ai/a	2	pt/a	3-4"W	A	0 a	0 a	0 a	96 ab	94 b	95 c
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
16	NONTREATED									0 a	0 a	0 a	0 c	0 c	0 d
	LSD (P=.05)									0.0	0.0	0.0	7.9	3.6	2.9
	Standard Deviation									0.0	0.0	0.0	4.7	2.1	1.7
	CV									0.0	0.0	0.0	5.55	2.5	2.04
	Replicate F									0.000	0.000	0.000	2.977	3.361	7.063
	Replicate Prob(F)									1.0000	1.0000	1.0000	0.0661	0.0482	0.0031
	Treatment F									0.000	0.000	0.000	149.264	732.144	1100.532
	Treatment Prob(F)									1.0000	1.0000	1.0000	0.0001	0.0001	0.0001

Glyphosate Tank-Mixture Adjuvant Trial in Corn - United Suppliers.

Trial ID: 12-50W-N100
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 6-18-12 Control Percent 7 DA-A	AMATA 6-25-12 Control Percent 14 DA-A	AMATA 7-9-12 Control Percent 28 DA-A	ABUTH 6-18-12 Control Percent 7 DA-A	ABUTH 6-25-12 Control Percent 14 DA-A	ABUTH 7-9-12 Control Percent 28 DA-A
1	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	85 bc	87 c	91 ab	83 ab	96 a	92 cde
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	CHEMSURF 80	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
2	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	90 ab	92 abc	94 ab	87 a	96 ab	92 b-e
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2442012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
3	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	90 ab	94 abc	93 ab	87 a	96 a	90 de
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2652012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
4	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	88 ab	92 abc	92 ab	85 ab	92 b	88 e
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2882012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
5	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	95 a	97 a	97 a	83 ab	94 ab	95 a-d
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2142012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
6	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	80 c	87 c	92 ab	77 c	94 ab	96 a-d
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	BETWEEN	100	SL	0.5	% v/v	4	pt/100 gal	3-4"W	A						
7	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	90 ab	96 ab	97 a	89 a	98 a	92 b-e
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	3-4"W	A						
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
8	NONTREATED									0 d	0 d	0 c	0 d	0 c	0 f
9	HALEX GT	4.38	CS	1.1	lb ai/a	2	pt/a	3-4"W	A	87 bc	87 c	88 b	80 bc	98 a	95 a-d
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	CHEMSURF 80	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
10	HALEX GT	4.38	CS	1.1	lb ai/a	2	pt/a	3-4"W	A	85 bc	86 c	90 ab	84 ab	97 a	97 abc
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2442012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
11	HALEX GT	4.38	CS	1.1	lb ai/a	2	pt/a	3-4"W	A	88 ab	89 bc	88 b	85 ab	98 a	96 abc
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2652012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
12	HALEX GT	4.38	CS	1.1	lb ai/a	2	pt/a	3-4"W	A	85 bc	90 abc	90 ab	84 ab	98 a	98 ab
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2882012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
13	HALEX GT	4.38	CS	1.1	lb ai/a	2	pt/a	3-4"W	A	85 bc	87 c	89 b	80 bc	96 a	98 ab
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	USIEX2142012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A						
14	HALEX GT	4.38	CS	1.1	lb ai/a	2	pt/a	3-4"W	A	95 a	94 abc	97 a	87 a	98 a	98 a
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
	BETWEEN	100	SL	0.5	% v/v	4	pt/100 gal	3-4"W	A						

Glyphosate Tank-Mixture Adjuvant Trial in Corn - United Suppliers.

Trial ID: 12-50W-N100
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 6-18-12 Control Percent 7 DA-A	AMATA 6-25-12 Control Percent 14 DA-A	AMATA 7-9-12 Control Percent 28 DA-A	ABUTH 6-18-12 Control Percent 7 DA-A	ABUTH 6-25-12 Control Percent 14 DA-A	ABUTH 7-9-12 Control Percent 28 DA-A
15	HALEX GT	4.38	CS	1.1	lb ai/a	2	pt/a	3-4"W	A	86 bc	93 abc	91 ab	85 ab	97 a	97 abc
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A						
16	NONTREATED									0 d	0 d	0 c	0 d	0 c	0 f
LSD (P=.05)										8.0	7.7	7.5	5.7	4.3	5.9
Standard Deviation										4.8	4.6	4.5	3.4	2.6	3.5
CV										6.23	5.81	5.56	4.68	3.06	4.29
Replicate F										6.602	1.160	1.185	0.118	4.601	0.005
Replicate Prob(F)										0.0042	0.3271	0.3197	0.8892	0.0181	0.9951
Treatment F										119.584	137.297	149.321	210.636	490.339	250.501
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Glyphosate Tank-Mixture Adjuvant Trial in Corn - United Suppliers.

Trial ID: 12-50W-N100
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 6-18-12 Control Percent 7 DA-A	AMBTR 6-25-12 Control Percent 14 DA-A	AMBTR 7-9-12 Control Percent 28 DA-A
1	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	80 a-e	98 a	98 a
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	3-4"W	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A			
	CHEMSURF 80	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A			
2	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	79 b-e	96 ab	97 ab
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	3-4"W	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A			
	USIEX2442012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A			
3	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	83 abc	99 a	97 ab
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	3-4"W	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A			
	USIEX2652012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A			
4	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	80 a-e	97 a	96 abc
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	3-4"W	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A			
	USIEX2882012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A			
5	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	82 a-d	98 a	98 ab
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	3-4"W	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A			
	USIEX2142012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A			
6	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	80 a-e	99 a	98 a
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	3-4"W	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A			
	BETWEEN	100	SL	0.5	% v/v	4	pt/100 gal	3-4"W	A			
7	ROUNDUP POWERMAX	4.5	SL	0.457	lb ae/a	13	fl oz/a	3-4"W	A	85 a	96 ab	97 ab
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	3-4"W	A			
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A			
8	NONTREATED									0 g	0 e	0 d
9	HALEX GT	4.38	CS	1.1	lb ai/a	2	pt/a	3-4"W	A	75 ef	90 d	96 bc
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A			
	CHEMSURF 80	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A			
10	HALEX GT	4.38	CS	1.1	lb ai/a	2	pt/a	3-4"W	A	78 c-f	96 ab	97 ab
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A			
	USIEX2442012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A			
11	HALEX GT	4.38	CS	1.1	lb ai/a	2	pt/a	3-4"W	A	85 a	99 a	97 ab
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A			
	USIEX2652012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A			
12	HALEX GT	4.38	CS	1.1	lb ai/a	2	pt/a	3-4"W	A	82 a-d	97 a	96 bc
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A			
	USIEX2882012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A			
13	HALEX GT	4.38	CS	1.1	lb ai/a	2	pt/a	3-4"W	A	77 def	93 cd	94 c
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A			
	USIEX2142012	100	SL	0.25	% v/v	2	pt/100 gal	3-4"W	A			
14	HALEX GT	4.38	CS	1.1	lb ai/a	2	pt/a	3-4"W	A	83 ab	93 bc	96 abc
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A			
	BETWEEN	100	SL	0.5	% v/v	4	pt/100 gal	3-4"W	A			

Southern Illinois University

Glyphosate Tank-Mixture Adjuvant Trial in Corn - United Suppliers.

Trial ID: 12-50W-N100
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR	AMBTR	AMBTR
	Pest Code									AMBTR	AMBTR	AMBTR
	Crop Code											
	Rating Date									6-18-12	6-25-12	7-9-12
	Rating Type									Control	Control	Control
	Rating Unit									Percent	Percent	Percent
	Rating Timing											
	Trt-Eval Interval									7 DA-A	14 DA-A	28 DA-A
15	HALEX GT	4.38	CS	1.1	lb ai/a	2	pt/a	3-4"W	A	73 f	93 bc	96 bc
	AMS	100	SG	1.02	% w/w	8.5	lb/100 gal	3-4"W	A			
16	NONTREATED									0 g	0 e	0 d
	LSD (P=.05)									5.6	3.1	2.4
	Standard Deviation									3.3	1.9	1.4
	CV									4.73	2.2	1.71
	Replicate F									0.744	0.456	0.706
	Replicate Prob(F)									0.4854	0.6397	0.5034
	Treatment F									207.467	946.186	1564.782
	Treatment Prob(F)									0.0001	0.0001	0.0001

Southern Illinois University

Glyphosate Tank-Mixture Adjuvant Trial in Corn - United Suppliers.

Trial ID: 12-50W-N100
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: United Suppliers.
2. Ratings: CI/WC at 7, 14, and 28 DAT.
3. Rainfall following the 3-4"W application was 0.75 inch on the same day, 4 hours after application, 0.36 inch 6 days later, 0.28 inch 27 days later, and 0.15 inch 48 days later.
4. Missing data for some weeds in some plots was due to low population.
5. Not harvested.

Glyphosate Plus Armezon Adjuvant Study.

Trial ID: 12-50W-M70
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-22-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate the efficacy of experimental adjuvant replacements for oil adjuvants with Touchdown HiTech plus Armezon.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 61-06 **Description:** RR2/LL
BBCH Scale: BCOR **Planting Date:** 5-22-12
Planting Method: SEEDED Seeded **Rate, Unit:** 28000 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** ABUTH - Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 2 Type: W **Code:** AMBTR - Ambrosia trifida L.
Common Name: ragweed, giant

Pest 3 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 27 FT
Plot Area, Unit: 270 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 150 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 1.7 **Texture:** SIL SILT LOAM
pH: 6.1 **Soil Name:** PIERRON
CEC: 9

Additional Measured Elements

Element	Quantity	Unit
P1	51	LB/A
K	285	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Southern Illinois University

Glyphosate Plus Armezon Adjuvant Study.

Trial ID: 12-50W-M70
Location: Belleville Res. Center
Investigator: Bryan Young

Application Description

	A
Application Date:	6-18-12
Time of Day:	7:30
Application Method:	Spray
Application Timing:	6-8"W
Application Placement:	BROFOL
Applied By:	RJW
Air Temperature, Unit:	80 F
% Relative Humidity:	67
Wind Velocity, Unit:	6 MPH
Wind Direction:	SW
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	78 F
Soil Moisture:	NORMAL
% Cloud Cover:	10
Next Rain Occurred On:	7-8-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMD BCOR
Stage Scale Used:	DESC
Stage Majority, Percent:	V7
Stage Minimum, Percent:	V6
Stage Maximum, Percent:	V7
Height, Unit:	24 IN
Height Minimum, Maximum:	20 24

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ABUTH W DESC
Stage Majority, Percent:	8
Stage Minimum, Percent:	Coty
Stage Maximum, Percent:	8
Height, Unit:	8 IN
Height Minimum, Maximum:	1 10
Density, Unit:	0.1 FT2
Pest 2 Code, Type, Scale:	AMBTR W DESC
Stage Majority, Percent:	14
Stage Minimum, Percent:	4
Stage Maximum, Percent:	20
Height, Unit:	8 IN
Height Minimum, Maximum:	2 14
Density, Unit:	0.3 FT2
Pest 3 Code, Type, Scale:	AMATA W DESC
Stage Majority, Percent:	16
Stage Minimum, Percent:	Coty
Stage Maximum, Percent:	20
Height, Unit:	8 IN
Height Minimum, Maximum:	1 12
Density, Unit:	0.5 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

Glyphosate Plus Armezon Adjuvant Study.

Trial ID: 12-50W-M70
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 7-2-12 Injury Percent 14 DA-A	ZEAMD 7-16-12 Injury Percent 28 DA-A	ABUTH 7-2-12 Control Percent 14 DA-A	ABUTH 7-16-12 Control Percent 28 DA-A	AMBTR 7-2-12 Control Percent 14 DA-A	AMBTR 7-16-12 Control Percent 28 DA-A
1	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	0 a	0 a	73 d	91 d	85 d	93 c
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A						
2	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	0 a	0 a	88 abc	96 ab	94 bc	96 b
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A						
3	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	0 a	0 a	83 c	92 cd	94 abc	97 ab
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A						
4	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	0 a	0 a	85 bc	93 bcd	95 ab	97 ab
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A						
	PRIME OIL COC	100	SL	1	% v/v	1	% v/v	6-8"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A						
5	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	0 a	0 a	87 bc	96 ab	96 a	98 a
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A						
	SUPERB HC	100	SL	1	pt/a	1	pt/a	6-8"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A						
6	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	0 a	0 a	87 bc	96 ab	95 ab	98 a
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A						
	SUPERB HC	100	SL	1	pt/a	1	pt/a	6-8"W	A						
	AG 8034	100	SL	2	% v/v	2	% v/v	6-8"W	A						
7	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	0 a	0 a	93 a	97 a	96 ab	98 a
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A						
	SUPERB HC	100	SL	1	pt/a	1	pt/a	6-8"W	A						
	AG 8034	100	SL	2	% v/v	2	% v/v	6-8"W	A						
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6-8"W	A						
8	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	0 a	0 a	83 c	95 abc	92 c	97 ab
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A						
	MSO (NOBLE)	100	SL	1	% v/v	1	% v/v	6-8"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A						
9	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	0 a	0 a	90 ab	96 ab	96 a	96 ab
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A						
	DESTINY HC	100	SL	1	pt/a	1	pt/a	6-8"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A						
10	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	0 a	0 a	87 bc	96 ab	95 ab	97 ab
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A						
	DESTINY HC	100	SL	1	pt/a	1	pt/a	6-8"W	A						
	AG 8034	100	SL	2	% v/v	2	% v/v	6-8"W	A						
11	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	0 a	0 a	86 bc	95 abc	95 ab	97 ab
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A						
	AG 12035	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A						
12	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	1 a	0 a	88 abc	97 a	96 ab	97 ab
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A						
	AG 11018	100	SL	1.5	% v/v	1.5	% v/v	6-8"W	A						

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Glyphosate Plus Armezon Adjuvant Study.

Trial ID: 12-50W-M70
Location: Belleville Res. Center
Investigator: Bryan Young

Pest Code												ABUTH	ABUTH	AMBTR	AMBTR
Crop Code												ZEAMD	ZEAMD		
Rating Date												7-2-12	7-16-12	7-2-12	7-16-12
Rating Type												Injury	Injury	Control	Control
Rating Unit												Percent	Percent	Percent	Percent
Rating Timing															
Trt-Eval Interval												14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
13	NONTREATED											0 a	0 a	0 e	0 e	0 e	0 d
LSD (P=.05)												0.8	0.0	5.7	3.4	2.4	1.7
Standard Deviation												0.5	0.0	3.4	2.0	1.4	1.0
CV												624.5	0.0	4.23	2.3	1.65	1.12
Replicate F												1.000	0.000	6.205	0.421	0.337	3.129
Replicate Prob(F)												0.3827	1.0000	0.0067	0.6610	0.7171	0.0620
Treatment F												1.000	0.000	157.221	513.692	1009.459	2178.315
Treatment Prob(F)												0.4777	1.0000	0.0001	0.0001	0.0001	0.0001

Glyphosate Plus Armezon Adjuvant Study.

Trial ID: 12-50W-M70
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 7-2-12 Control Percent 14 DA-A	AMATA 7-16-12 Control Percent 28 DA-A
1	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	62 d	90 b
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A		
2	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	93 ab	98 a
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A		
3	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	83 abc	96 a
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A		
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A		
4	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	77 c	96 a
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A		
	PRIME OIL COC	100	SL	1	% v/v	1	% v/v	6-8"W	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A		
5	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	85 abc	98 a
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A		
	SUPERB HC	100	SL	1	pt/a	1	pt/a	6-8"W	A		
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A		
6	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	94 a	97 a
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A		
	SUPERB HC	100	SL	1	pt/a	1	pt/a	6-8"W	A		
	AG 8034	100	SL	2	% v/v	2	% v/v	6-8"W	A		
7	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	94 a	98 a
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A		
	SUPERB HC	100	SL	1	pt/a	1	pt/a	6-8"W	A		
	AG 8034	100	SL	2	% v/v	2	% v/v	6-8"W	A		
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6-8"W	A		
8	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	83 abc	98 a
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A		
	MSO (NOBLE)	100	SL	1	% v/v	1	% v/v	6-8"W	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A		
9	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	88 abc	97 a
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A		
	DESTINY HC	100	SL	1	pt/a	1	pt/a	6-8"W	A		
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A		
10	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	88 abc	97 a
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A		
	DESTINY HC	100	SL	1	pt/a	1	pt/a	6-8"W	A		
	AG 8034	100	SL	2	% v/v	2	% v/v	6-8"W	A		
11	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	82 bc	91 b
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A		
	AG 12035	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A		
12	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	6-8"W	A	89 abc	98 a
	ARMEZON	2.8	SL	0.0082	lb ai/a	0.375	fl oz/a	6-8"W	A		
	AG 11018	100	SL	1.5	% v/v	1.5	% v/v	6-8"W	A		

Glyphosate Plus Armezon Adjuvant Study.

Trial ID: 12-50W-M70
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 7-2-12 Control Percent 14 DA-A	AMATA 7-16-12 Control Percent 28 DA-A
	Pest Code									AMATA	AMATA
	Crop Code										
	Rating Date									7-2-12	7-16-12
	Rating Type									Control	Control
	Rating Unit									Percent	Percent
	Rating Timing										
	Trt-Eval Interval									14 DA-A	28 DA-A
13	NONTREATED									0 e	0 c
	LSD (P=.05)									12.5	3.5
	Standard Deviation									7.4	2.1
	CV									9.46	2.36
	Replicate F									7.069	2.182
	Replicate Prob(F)									0.0039	0.1347
	Treatment F									34.339	492.405
	Treatment Prob(F)									0.0001	0.0001

Southern Illinois University

Glyphosate Plus Armezon Adjuvant Study.

Trial ID: 12-50W-M70
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Winfield Solutions.
2. Ratings: CI/WC at 14 and 28 DAT.
3. Rainfall following the 6-8"W application was 0.28 inch 20 days later, and 0.15 inch 41 days later.
4. Not harvested.

AMS Replacements with Glyphosate - Winfield Solutions.

Trial ID: 12-10C-W80
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 6-1-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate the efficacy of experimental adjuvant replacements for ammonium sulfate with Touchdown HiTech.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 6-1-12
Planting Method: SEEDED Seeded **Rate, Unit:** 75 LB/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** ABUTH - Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 2 Type: W **Code:** IPOHE - Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Pest 3 Type: W **Code:** SETFA - Setaria faberi Herrm.
Common Name: foxtail, giant

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 24 FT
Plot Area, Unit: 240 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 150 LB/A

Soil Description

% OM: 1.8 **Texture:** SIL SILT LOAM
pH: 6.9 **Soil Name:** PIERRON
CEC: 9

Additional Measured Elements

Element	Quantity	Unit
P1	100	LB/A
K	322	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

AMS Replacements with Glyphosate - Winfield Solutions.

Trial ID: 12-10C-W80
Location: Belleville Res. Center
Investigator: Bryan Young

Application Description

	A
Application Date:	6-29-12
Time of Day:	6:30
Application Method:	Spray
Application Timing:	4-6"W
Application Placement:	BROFOL
Applied By:	JRK
Air Temperature, Unit:	79 F
% Relative Humidity:	58
Wind Velocity, Unit:	1 MPH
Wind Direction:	W
Dew Presence (Y/N):	Y yes
Soil Temperature, Unit:	79 F
Soil Moisture:	BELNOR
% Cloud Cover:	5
Next Rain Occurred On:	7-8-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	V2
Stage Minimum, Percent:	V1
Stage Maximum, Percent:	V2
Height, Unit:	4 IN
Height Minimum, Maximum:	3 4

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ABUTH W DESC
Stage Majority, Percent:	4
Stage Minimum, Percent:	Coty
Stage Maximum, Percent:	6
Height, Unit:	4 IN
Height Minimum, Maximum:	1 6
Density, Unit:	0.5 FT2
Pest 2 Code, Type, Scale:	IPOHE W DESC
Stage Majority, Percent:	4
Stage Minimum, Percent:	Coty
Stage Maximum, Percent:	8
Height, Unit:	4 IN
Height Minimum, Maximum:	1 6
Density, Unit:	0.5 FT2
Pest 3 Code, Type, Scale:	SETFA W DESC
Stage Majority, Percent:	4
Stage Minimum, Percent:	1
Stage Maximum, Percent:	6
Height, Unit:	3 IN
Height Minimum, Maximum:	1 5
Density, Unit:	0.3 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	TT
Nozzle Size:	110015
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	10 GPA

AMS Replacements with Glyphosate - Winfield Solutions.

Trial ID: 12-10C-W80
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 7-13-12 Injury Percent 14 DA-A	GLXMA 7-27-12 Injury Percent 28 DA-A	ABUTH 7-13-12 Control Percent 14 DA-A	ABUTH 7-27-12 Control Percent 28 DA-A	IPOHE 7-13-12 Control Percent 14 DA-A	IPOHE 7-27-12 Control Percent 28 DA-A
1	HARD WATER (500 PPM)									0 a	0 a	47 h	57 f	55 f	68 f
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A						
2	HARD WATER (500 PPM)									0 a	0 a	72 bcd	90 a	67 abc	80 a
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
3	HARD WATER (500 PPM)									0 a	0 a	77 a	91 a	70 a	81 a
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A						
4	HARD WATER (500 PPM)									0 a	0 a	75 ab	89 ab	65 cd	75 b
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A						
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A						
5	HARD WATER (500 PPM)									0 a	0 a	70 cde	84 bc	64 cd	74 bc
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A						
	CLASS ACT NG	100	SL	1.25	% v/v	1.25	% v/v	4-6"W	A						
6	HARD WATER (500 PPM)									0 a	0 a	74 abc	87 ab	69 ab	74 bc
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A						
	AG 8034	100	SL	2	% v/v	2	% v/v	4-6"W	A						
7	HARD WATER (500 PPM)									0 a	0 a	66 f	80 c	62 de	70 ef
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A						
	AG 8034	100	SL	1	% v/v	1	% v/v	4-6"W	A						
8	HARD WATER (500 PPM)									0 a	0 a	66 f	72 d	65 bcd	74 bcd
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A						
	AG 07043	100	SL	1	% v/v	1	% v/v	4-6"W	A						
9	HARD WATER (500 PPM)									0 a	0 a	58 g	65 e	58 ef	70 ef
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A						
	AG 11011	100	SL	1	% v/v	1	% v/v	4-6"W	A						
10	HARD WATER (500 PPM)									0 a	0 a	67 ef	74 d	64 cd	72 de
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A						
	AG 12030	100	SL	1	% v/v	1	% v/v	4-6"W	A						
11	HARD WATER (500 PPM)									0 a	0 a	68 def	72 d	61 de	70 ef
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A						
	AG 12030	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A						
12	HARD WATER (500 PPM)									0 a	0 a	70 c-f	70 de	65 bcd	72 cd
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A						
	AG 12030	100	SL	1	% v/v	1	% v/v	4-6"W	A						
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A						
13	NONTREATED									0 a	0 a	0 i	0 g	0 g	0 g
LSD (P=.05)										0.0	0.0	4.1	5.7	4.3	2.2
Standard Deviation										0.0	0.0	2.4	3.4	2.6	1.3
CV										0.0	0.0	3.91	4.69	4.37	1.88
Replicate F										0.000	0.000	1.808	0.385	0.514	5.402
Replicate Prob(F)										1.0000	1.0000	0.1856	0.6845	0.6044	0.0116
Treatment F										0.000	0.000	208.466	152.334	149.386	788.150
Treatment Prob(F)										1.0000	1.0000	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

AMS Replacements with Glyphosate - Winfield Solutions.

Trial ID: 12-10C-W80
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	SETFA 7-13-12 Control Percent 14 DA-A	SETFA 7-27-12 Control Percent 28 DA-A
	Pest Code									SETFA	SETFA
	Crop Code										
	Rating Date									7-13-12	7-27-12
	Rating Type									Control	Control
	Rating Unit									Percent	Percent
	Rating Timing										
	Trt-Eval Interval									14 DA-A	28 DA-A
1	HARD WATER (500 PPM)									82 e	92 bc
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A		
2	HARD WATER (500 PPM)									94 c	97 ab
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A		
3	HARD WATER (500 PPM)									95 c	97 ab
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A		
4	HARD WATER (500 PPM)									99 a	98 a
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A		
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	4-6"W	A		
5	HARD WATER (500 PPM)									98 ab	97 a
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A		
	CLASS ACT NG	100	SL	1.25	% v/v	1.25	% v/v	4-6"W	A		
6	HARD WATER (500 PPM)									98 ab	98 a
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A		
	AG 8034	100	SL	2	% v/v	2	% v/v	4-6"W	A		
7	HARD WATER (500 PPM)									98 ab	97 a
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A		
	AG 8034	100	SL	1	% v/v	1	% v/v	4-6"W	A		
8	HARD WATER (500 PPM)									96 bc	97 ab
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A		
	AG 07043	100	SL	1	% v/v	1	% v/v	4-6"W	A		
9	HARD WATER (500 PPM)									96 bc	97 a
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A		
	AG 11011	100	SL	1	% v/v	1	% v/v	4-6"W	A		
10	HARD WATER (500 PPM)									87 d	89 c
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A		
	AG 12030	100	SL	1	% v/v	1	% v/v	4-6"W	A		
11	HARD WATER (500 PPM)									82 e	90 c
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A		
	AG 12030	100	SL	0.5	% v/v	0.5	% v/v	4-6"W	A		
12	HARD WATER (500 PPM)									96 bc	97 ab
	TOUCHDOWN HI-TECH	5	SL	0.375	lb ae/a	9.6	fl oz/a	4-6"W	A		
	AG 12030	100	SL	1	% v/v	1	% v/v	4-6"W	A		
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A		
13	NONTREATED									0 f	0 d
	LSD (P=.05)									2.6	4.4
	Standard Deviation									1.6	2.6
	CV									1.8	2.98
	Replicate F									1.367	3.919
	Replicate Prob(F)									0.2739	0.0337
	Treatment F									878.267	309.384
	Treatment Prob(F)									0.0001	0.0001

Southern Illinois University

AMS Replacements with Glyphosate - Winfield Solutions.

Trial ID: 12-10C-W80
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Winfield Solutions.
2. Ratings: CI/WC at 14 and 28 DAT.
3. Mixing order: Water (at least 75% of the water), Adjuvant (water conditioner), Herbicide.
4. Mixing: Use hardwater (500 PPM).
HARD WATER (500 PPM) = Ca + Mg hard water.
HARD WATER MIXING INSTRUCTIONS:
To make 1 gallon of 500 ppm Ca + Mg hard water use the formula:
2.24 g of $CaCl_2$-$2H_2O$ (Calcium Chloride Dihydrate)
0.77 g of $MgCl_2$-$6H_20$ (Magnesium Chloride Hexahydrate)
1 gallon distilled water
Be sure to use the dihydrate form of the calcium chloride and the hexahydrate form of the magnesium chloride.
Be sure to stir in the salts to insure that the solutions are all homogeneous before use.
5. Not harvested.

Plant Growth Regulator Adjuvant Trial - Winfield Solutions.

Trial ID: 12-ARC-4-E80
Location: Agronomy Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-31-12

Trial Location

City: Carbondale
State/Prov.: IL
Postal Code: 62901
Country: USA

Objectives:
Determine the influence of herbicide formulation and tank-mix adjuvant on plant growth regulator herbicide efficacy.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: P1498HR **Description:** RR2/LL
BBCH Scale: BCOR **Planting Date:** 5-31-12
Planting Method: SEEDED Seeded **Rate, Unit:** 28000 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** IPOHE - Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT
Plot Area, Unit: 280 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 150 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 2.2 **Texture:** SIL SILT LOAM
pH: 6.2 **Soil Name:** WEIR
CEC: 9.7

Additional Measured Elements

Element	Quantity	Unit
P1	60	LB/A
K	259	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Carbondale IL **Distance, Unit:** 0.5 MI

Plant Growth Regulator Adjuvant Trial - Winfield Solutions.

Trial ID: 12-ARC-4-E80
Location: Agronomy Res. Center
Investigator: Bryan Young

Application Description

	A
Application Date:	7-13-12
Time of Day:	10:30
Application Method:	Spray
Application Timing:	4-6"W
Application Placement:	BROFOL
Applied By:	LAH
Air Temperature, Unit:	86 F
% Relative Humidity:	52
Wind Velocity, Unit:	4 MPH
Wind Direction:	N
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	82 F
Soil Moisture:	BELNOR
% Cloud Cover:	30
Next Rain Occurred On:	7-14-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMD BCOR
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	IPOHE W DESC
Stage Majority, Percent:	10
Stage Minimum, Percent:	2
Stage Maximum, Percent:	16
Height, Unit:	4 IN
Height Minimum, Maximum:	1 6
Density, Unit:	5 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	TTI
Nozzle Size:	11002
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

Plant Growth Regulator Adjuvant Trial - Winfield Solutions.

Trial ID: 12-ARC-4-E80
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 7-27-12 Injury Percent 14 DA-A	ZEAMD 8-10-12 Injury Percent 28 DA-A	IPOHE 7-27-12 Control Percent 14 DA-A	IPOHE 8-10-12 Control Percent 28 DA-A
1	NONTREATED									0 a	0 a	0 e	0 c
2	AGH 02007	6.01	SL	0.503	lb ae/a	0.67	pt/a	4-6"W	A	0 a	0 a	99 ab	96 ab
3	2,4-D LV 6	5.6	SL	0.47	lb ae/a	0.67	pt/a	4-6"W	A	0 a	0 a	99 a	98 ab
4	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	4-6"W	A	0 a	0 a	99 a	97 ab
5	AGH 09008	3.5	SL	0.437	lb ae/a	1	pt/a	4-6"W	A	0 a	0 a	97 d	96 b
6	AGH 09008	3.5	SL	0.437	lb ae/a	1	pt/a	4-6"W	A	2 a	0 a	98 abc	97 ab
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	4-6"W	A				
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A				
7	BRASH	3.87	SL	0.726	lb ae/a	1.5	pt/a	4-6"W	A	0 a	0 a	97 bcd	97 ab
8	BRASH	3.87	SL	0.726	lb ae/a	1.5	pt/a	4-6"W	A	0 a	0 a	97 cd	96 ab
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	4-6"W	A				
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A				
9	AGH 11021	100	SL	1.5	pt/a	1.5	pt/a	4-6"W	A	0 a	0 a	99 a	97 ab
10	AGH 11021	100	SL	1.5	pt/a	1.5	pt/a	4-6"W	A	0 a	0 a	99 ab	98 ab
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	4-6"W	A				
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A				
11	BRASH	3.87	SL	0.97	lb ae/a	2	pt/a	4-6"W	A	0 a	0 a	99 ab	97 ab
12	AGH 11021	100	SL	2	pt/a	2	pt/a	4-6"W	A	0 a	0 a	99 a	98 a
13	AGH 11021	100	SL	2	pt/a	2	pt/a	4-6"W	A				
	PREFERENCE	100	SL	0.25	% v/v	0.25	% v/v	4-6"W	A				
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A				
LSD (P=.05)										1.4	0.0	1.6	1.7
Standard Deviation										0.8	0.0	0.9	1.0
CV										600.0	0.0	1.05	1.12
Replicate F										1.000	0.000	1.340	0.696
Replicate Prob(F)										0.3840	1.0000	0.2824	0.5091
Treatment F										1.000	0.000	2712.499	2365.213
Treatment Prob(F)										0.4767	1.0000	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Plant Growth Regulator Adjuvant Trial - Winfield Solutions.

Trial ID: 12-ARC-4-E80
Location: Agronomy Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Winfield Solutions.
2. CI/WC at 14 and 28 DAT.
3. NOTE: These herbicide products are not intended for use in corn and the experiment was conducted for evaluation purposes only.
4. Missing data for treatment 13 was due to a mixing error.
5. Not harvested.

Glyphosate Nozzle by Adjuvants Study - Winfield Solutions.

Trial ID: 12-21M-MW130
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 6-4-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate the effect of Interlock and spray nozzles on the efficacy of weed control with glyphosate.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 6-4-12
Planting Method: SEEDED Seeded **Rate, Unit:** 75 LB/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** IPOHE - Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Pest 2 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 3 Type: W **Code:** XANST - Xanthium strumarium L.
Common Name: cocklebur, common

Pest 4 Type: W **Code:** SETFA - Setaria faberi Herrm.
Common Name: foxtail, giant

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 60 FT
Plot Area, Unit: 600 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 100 LB/A

Soil Description

% OM: 2.1 **Texture:** SIL SILT LOAM
pH: 6 **Soil Name:** BETHALTO
CEC: 12

Additional Measured Elements

Element	Quantity	Unit
P1	89	LB/A
K	400	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Glyphosate Nozzle by Adjuvants Study - Winfield Solutions.

Trial ID: 12-21M-MW130
Location: Belleville Res. Center
Investigator: Bryan Young

Application Description

	A
Application Date:	7-9-12
Time of Day:	7:00
Application Method:	Spray
Application Timing:	4-6"W
Application Placement:	BROFOL
Applied By:	JRK
Air Temperature, Unit:	75 F
% Relative Humidity:	69
Wind Velocity, Unit:	1 MPH
Wind Direction:	N
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	83 F
Soil Moisture:	BELNOR
% Cloud Cover:	90
Next Rain Occurred On:	7-29-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	V3
Stage Minimum, Percent:	V2
Stage Maximum, Percent:	V3
Height, Unit:	7 IN
Height Minimum, Maximum:	3 7

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	IPOHE W DESC
Stage Majority, Percent:	6
Stage Minimum, Percent:	Coty
Stage Maximum, Percent:	14
Height, Unit:	3 IN
Height Minimum, Maximum:	1 5
Density, Unit:	0.5 FT2
Pest 2 Code, Type, Scale:	AMATA W DESC
Stage Majority, Percent:	6
Stage Minimum, Percent:	2
Stage Maximum, Percent:	12
Height, Unit:	5 IN
Height Minimum, Maximum:	1 8
Density, Unit:	0.3 FT2
Pest 3 Code, Type, Scale:	XANST W DESC
Stage Majority, Percent:	4
Stage Minimum, Percent:	2
Stage Maximum, Percent:	6
Height, Unit:	4 IN
Height Minimum, Maximum:	1 6
Density, Unit:	0.1 FT2
Pest 4 Code, Type, Scale:	SETFA W DESC
Stage Majority, Percent:	4
Stage Minimum, Percent:	1
Stage Maximum, Percent:	7
Height, Unit:	5 IN
Height Minimum, Maximum:	0.5 8
Density, Unit:	0.5 FT2

Glyphosate Nozzle by Adjuvants Study - Winfield Solutions.

Trial ID: 12-21M-MW130
Location: Belleville Res. Center
Investigator: Bryan Young

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	ALTEVE
Nozzle Type:	See
Nozzle Size:	comment
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	10 GPA

Glyphosate Nozzle by Adjuvants Study - Winfield Solutions.

Trial ID: 12-21M-MW130
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 7-16-12 Injury Percent 7 DA-A	GLXMA 7-23-12 Injury Percent 14 DA-A	GLXMA 8-6-12 Injury Percent 28 DA-A
1	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH									0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
2	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH									0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
3	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH									0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
4	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH									0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
5	COARSE AIXR 11004 @ 50 PSI 13.4 MPH									0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
6	COARSE AIXR 11004 @ 50 PSI 13.4 MPH									0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
7	VC-XC AI 11004 @ 50 PSI 13.4 MPH									0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
8	VC-XC AI 11004 @ 50 PSI 13.4 MPH									0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
9	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH									0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
10	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH									0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Glyphosate Nozzle by Adjuvants Study - Winfield Solutions.

Trial ID: 12-21M-MW130
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 7-16-12 Injury Percent 7 DA-A	GLXMA 7-23-12 Injury Percent 14 DA-A	GLXMA 8-6-12 Injury Percent 28 DA-A
11	NONTREATED									0 a	0 a	0 a
	LSD (P=.05)									0.0	0.0	0.0
	Standard Deviation									0.0	0.0	0.0
	CV									0.0	0.0	0.0
	Replicate F									0.000	0.000	0.000
	Replicate Prob(F)									1.0000	1.0000	1.0000
	Treatment F									0.000	0.000	0.000
	Treatment Prob(F)									1.0000	1.0000	1.0000

Glyphosate Nozzle by Adjuvants Study - Winfield Solutions.

Trial ID: 12-21M-MW130
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	IPOHE	IPOHE	IPOHE
	Pest Code									IPOHE	IPOHE	IPOHE
	Crop Code											
	Rating Date									7-16-12	7-23-12	8-6-12
	Rating Type									Control	Control	Control
	Rating Unit									Percent	Percent	Percent
	Rating Timing											
	Trt-Eval Interval									7 DA-A	14 DA-A	28 DA-A
1	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH									73 ab	68 ab	68 ab
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
2	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH									68 ab	62 abc	63 bc
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
3	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH									72 ab	65 ab	65 abc
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
4	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH									73 ab	60 bc	60 bc
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
5	COARSE AIXR 11004 @ 50 PSI 13.4 MPH									68 ab	62 abc	65 abc
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
6	COARSE AIXR 11004 @ 50 PSI 13.4 MPH									65 b	58 bc	58 bc
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
7	VC-XC AI 11004 @ 50 PSI 13.4 MPH									78 a	72 a	73 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
8	VC-XC AI 11004 @ 50 PSI 13.4 MPH									65 b	53 c	56 c
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
9	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH									71 ab	65 ab	65 abc
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
10	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH									68 ab	67 ab	68 ab
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			

Glyphosate Nozzle by Adjuvants Study - Winfield Solutions.

Trial ID: 12-21M-MW130
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	IPOHE	IPOHE	IPOHE
	Pest Code									IPOHE	IPOHE	IPOHE
	Crop Code											
	Rating Date									7-16-12	7-23-12	8-6-12
	Rating Type									Control	Control	Control
	Rating Unit									Percent	Percent	Percent
	Rating Timing											
	Trt-Eval Interval									7 DA-A	14 DA-A	28 DA-A
11	NONTREATED									0 c	0 d	0 d
	LSD (P=.05)									10.4	11.3	10.4
	Standard Deviation									6.1	6.6	6.1
	CV									9.56	11.53	10.44
	Replicate F									7.389	5.805	9.718
	Replicate Prob(F)									0.0040	0.0103	0.0011
	Treatment F									37.169	26.512	32.199
	Treatment Prob(F)									0.0001	0.0001	0.0001

Glyphosate Nozzle by Adjuvants Study - Winfield Solutions.

Trial ID: 12-21M-MW130
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 7-16-12 Control Percent 7 DA-A	AMATA 7-23-12 Control Percent 14 DA-A	AMATA 8-6-12 Control Percent 28 DA-A
1	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH									75 abc	88 a	90 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
2	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH									72 bc	87 a	91 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
3	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH									82 a	88 a	90 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
4	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH									75 abc	83 a	90 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
5	COARSE AIXR 11004 @ 50 PSI 13.4 MPH									78 ab	86 a	90 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
6	COARSE AIXR 11004 @ 50 PSI 13.4 MPH									70 c	83 a	86 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
7	VC-XC AI 11004 @ 50 PSI 13.4 MPH									72 bc	83 a	87 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
8	VC-XC AI 11004 @ 50 PSI 13.4 MPH									73 bc	86 a	91 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
9	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH									72 bc	83 a	88 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
10	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH									72 bc	84 a	89 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			

Glyphosate Nozzle by Adjuvants Study - Winfield Solutions.

Trial ID: 12-21M-MW130
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
Pest Code										AMATA	AMATA	AMATA
Crop Code												
Rating Date										7-16-12	7-23-12	8-6-12
Rating Type										Control	Control	Control
Rating Unit										Percent	Percent	Percent
Rating Timing												
Trt-Eval Interval										7 DA-A	14 DA-A	28 DA-A
11	NONTREATED									0 d	0 b	0 b
LSD (P=.05)										6.8	8.4	6.3
Standard Deviation										4.0	5.0	3.7
CV										5.91	6.4	4.58
Replicate F										0.000	2.983	0.915
Replicate Prob(F)										1.0000	0.0735	0.4165
Treatment F										96.555	81.044	158.078
Treatment Prob(F)										0.0001	0.0001	0.0001

Glyphosate Nozzle by Adjuvants Study - Winfield Solutions.

Trial ID: 12-21M-MW130
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	XANST 7-16-12 Control Percent 7 DA-A	XANST 7-23-12 Control Percent 14 DA-A	XANST 8-6-12 Control Percent 28 DA-A
1	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH									99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
2	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH									99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
3	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH									99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
4	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH									96 b	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
5	COARSE AIXR 11004 @ 50 PSI 13.4 MPH									99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
6	COARSE AIXR 11004 @ 50 PSI 13.4 MPH									99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
7	VC-XC AI 11004 @ 50 PSI 13.4 MPH									99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
8	VC-XC AI 11004 @ 50 PSI 13.4 MPH									99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
9	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH									99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
10	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH									98 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			

Glyphosate Nozzle by Adjuvants Study - Winfield Solutions.

Trial ID: 12-21M-MW130
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	XANST 7-16-12 Control Percent 7 DA-A	XANST 7-23-12 Control Percent 14 DA-A	XANST 8-6-12 Control Percent 28 DA-A
11	NONTREATED									0 c	0 b	0 b
LSD (P=.05)										1.3	0.0	0.0
Standard Deviation										0.8	0.0	0.0
CV										0.85	0.0	0.0
Replicate F										1.458	0.000	0.000
Replicate Prob(F)										0.2563	1.0000	1.0000
Treatment F										4566.657	0.000	0.000
Treatment Prob(F)										0.0001	1.0000	1.0000

Glyphosate Nozzle by Adjuvants Study - Winfield Solutions.

Trial ID: 12-21M-MW130
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	SETFA 7-16-12 Control Percent 7 DA-A	SETFA 7-23-12 Control Percent 14 DA-A	SETFA 8-6-12 Control Percent 28 DA-A
1	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH									99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
2	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH									99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
3	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH									99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
4	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH									98 a	98 a	99 ab
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
5	COARSE AIXR 11004 @ 50 PSI 13.4 MPH									98 a	98 a	98 b
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
6	COARSE AIXR 11004 @ 50 PSI 13.4 MPH									99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
7	VC-XC AI 11004 @ 50 PSI 13.4 MPH									98 a	98 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
8	VC-XC AI 11004 @ 50 PSI 13.4 MPH									98 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
9	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH									98 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			
10	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH									98 a	98 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	4-6"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	A			

Glyphosate Nozzle by Adjuvants Study - Winfield Solutions.

Trial ID: 12-21M-MW130
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
Pest Code										SETFA	SETFA	SETFA
Crop Code												
Rating Date										7-16-12	7-23-12	8-6-12
Rating Type										Control	Control	Control
Rating Unit										Percent	Percent	Percent
Rating Timing												
Trt-Eval Interval										7 DA-A	14 DA-A	28 DA-A
11	NONTREATED									0 b	0 b	0 c
LSD (P=.05)										1.4	1.0	0.6
Standard Deviation										0.8	0.6	0.4
CV										0.92	0.65	0.42
Replicate F										7.679	5.714	1.957
Replicate Prob(F)										0.0034	0.0109	0.1675
Treatment F										3896.688	7834.376	19138.133
Treatment Prob(F)										0.0001	0.0001	0.0001

Southern Illinois University

Glyphosate Nozzle by Adjuvants Study - Winfield Solutions.

Trial ID: 12-21M-MW130
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Winfield Solutions.
2. Ratings: CI/WC at 7, 14 and 28 DAT.
3. Nozzle type/size, application PSI, and application speed are per treatment, see treatment list.
4. Rainfall following the 4-6"W application was 0.15 inch 20 days later.
5. Not harvested.

2,4-D Amine 4 Nozzle by Adjuvants Study - Winfield Solutions.

Trial ID: 12-51E-M120
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 7-4-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate different spray droplet size categories and the addition of Interlock on the efficacy of 2,4-D Amine 4 on broadleaf weeds.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: NONE - Non-crop

Pest Description

Pest 1 Type: W **Code:** ABUTH - Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 2 Type: W **Code:** IPOSS
Common Name: morningglory, species
Description: Mostly IPOHE, some PHBPU (tall mg.)

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 40 FT
Plot Area, Unit: 400 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 150 LB/A, P2O5 50 LB/A, K2O 100 LB/A

Soil Description

% OM: 1.7 **Texture:** SIL SILT LOAM
pH: 6.6 **Soil Name:** PIERRON
CEC: 10

Additional Measured Elements

Element	Quantity	Unit
P1	75	LB/A
K	347	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

2,4-D Amine 4 Nozzle by Adjuvants Study - Winfield Solutions.

Trial ID: 12-51E-M120
Location: Belleville Res. Center
Investigator: Bryan Young

Application Description

	A
Application Date:	7-4-12
Time of Day:	7:30
Application Method:	Spray
Application Timing:	4-6"W
Application Placement:	BROFOL
Applied By:	JRK
Air Temperature, Unit:	88 F
% Relative Humidity:	55
Wind Velocity, Unit:	0 MPH
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	81 F
Soil Moisture:	BELNOR
% Cloud Cover:	5
Next Rain Occurred On:	7-8-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	NONE
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ABUTH W DESC
Stage Majority, Percent:	6
Stage Minimum, Percent:	2
Stage Maximum, Percent:	8
Height, Unit:	5 IN
Height Minimum, Maximum:	1 10
Density, Unit:	0.5 FT2
Pest 2 Code, Type, Scale:	IPOSS W DESC
Stage Majority, Percent:	6
Stage Minimum, Percent:	Coty
Stage Maximum, Percent:	8
Height, Unit:	5 IN
Height Minimum, Maximum:	1 8
Density, Unit:	0.5 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	ALTEVE
Nozzle Type:	See
Nozzle Size:	comment
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	10 GPA

2,4-D Amine 4 Nozzle by Adjuvants Study - Winfield Solutions.

Trial ID: 12-51E-M120
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ABUTH 7-11-12 Control Percent 7 DA-A	ABUTH 7-18-12 Control Percent 14 DA-A	ABUTH 8-1-12 Control Percent 28 DA-A	IPOSS 7-11-12 Control Percent 7 DA-A	IPOSS 7-18-12 Control Percent 14 DA-A	IPOSS 8-1-12 Control Percent 28 DA-A
1	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH									63 ab	80 b	65 bc	83 b	99 a	99 a
	2,4-D AMINE 4	3.8	SL	0.238	lb ae/a	8	fl oz/a	4-6"W	A						
2	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH									63 ab	81 ab	67 abc	85 ab	99 a	99 a
	2,4-D AMINE 4	3.8	SL	0.238	lb ae/a	8	fl oz/a	4-6"W	A						
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A						
3	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH									60 b	82 ab	72 abc	83 b	99 a	99 a
	2,4-D AMINE 4	3.8	SL	0.238	lb ae/a	8	fl oz/a	4-6"W	A						
4	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH									65 a	85 a	73 ab	84 ab	99 a	99 a
	2,4-D AMINE 4	3.8	SL	0.238	lb ae/a	8	fl oz/a	4-6"W	A						
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A						
5	COARSE AIXR 11004 @ 50 PSI 13.4 MPH									63 ab	83 ab	75 a	87 a	99 a	98 b
	2,4-D AMINE 4	3.8	SL	0.238	lb ae/a	8	fl oz/a	4-6"W	A						
6	COARSE AIXR 11004 @ 50 PSI 13.4 MPH									62 ab	83 ab	70 abc	84 ab	99 a	99 a
	2,4-D AMINE 4	3.8	SL	0.238	lb ae/a	8	fl oz/a	4-6"W	A						
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A						
7	VC-XC AI 11004 @ 50 PSI 13.4 MPH									60 b	81 ab	63 c	80 c	99 a	99 a
	2,4-D AMINE 4	3.8	SL	0.238	lb ae/a	8	fl oz/a	4-6"W	A						
8	VC-XC AI 11004 @ 50 PSI 13.4 MPH									62 ab	85 a	71 abc	85 ab	99 a	99 a
	2,4-D AMINE 4	3.8	SL	0.238	lb ae/a	8	fl oz/a	4-6"W	A						
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A						
9	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH									63 ab	81 ab	63 c	86 ab	99 a	99 a
	2,4-D AMINE 4	3.8	SL	0.238	lb ae/a	8	fl oz/a	4-6"W	A						
10	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH									62 ab	79 b	52 d	83 b	99 a	99 a
	2,4-D AMINE 4	3.8	SL	0.238	lb ae/a	8	fl oz/a	4-6"W	A						
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A						
11	NONTREATED									0 c	0 c	0 e	0 d	0 b	0 c
LSD (P=.05)										4.7	4.2	9.3	3.2	0.0	1.2
Standard Deviation										2.8	2.5	5.5	1.9	0.0	0.7
CV										4.91	3.34	8.98	2.48	0.0	0.77
Replicate F										0.546	0.410	1.932	3.646	0.000	1.000
Replicate Prob(F)										0.5876	0.6693	0.1710	0.0447	1.0000	0.3855
Treatment F										137.980	297.584	45.165	538.349	0.000	5499.213
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	1.0000	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

2,4-D Amine 4 Nozzle by Adjuvants Study - Winfield Solutions.

Trial ID: 12-51E-M120
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Winfield Solutions.
2. Ratings: CI/WC at 7, 14 and 28 DAT.
3. Nozzle type/size, application PSI, and application speed are per treatment, see treatment list.
4. IPOSS = Morningglory species 80% IPOHE (ivyleaf morningglory) and 20% PHBPU (tall morningglory).
5. Not harvested (non-crop).

Dicamba Nozzle by Adjuvants Study - Winfield Solutions.

Trial ID: 12-51E-S130
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 7-4-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate different spray droplet size categories and the addition of Interlock on the efficacy of dicamba on broadleaf weeds.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: NONE - Non-crop

Pest Description

Pest 1 Type: W **Code:** ABUTH - Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 2 Type: W **Code:** IPOSS
Common Name: morningglory, species
Description: Mostly IPOHE, some PHBPU (tall mg.)

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 40 FT
Plot Area, Unit: 400 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 150 LB/A, P2O5 50 LB/A, K2O 100 LB/A

Soil Description

% OM: 1.7 **Texture:** SIL SILT LOAM
pH: 6.6 **Soil Name:** PIERRON
CEC: 10

Additional Measured Elements

Element	Quantity	Unit
P1	75	LB/A
K	347	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Dicamba Nozzle by Adjuvants Study - Winfield Solutions.

Trial ID: 12-51E-S130
Location: Belleville Res. Center
Investigator: Bryan Young

Application Description

	A
Application Date:	7-4-12
Time of Day:	6:30
Application Method:	Spray
Application Timing:	4-6"W
Application Placement:	BROFOL
Applied By:	JRK
Air Temperature, Unit:	88 F
% Relative Humidity:	55
Wind Velocity, Unit:	0 MPH
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	81 F
Soil Moisture:	BELNOR
% Cloud Cover:	5
Next Rain Occurred On:	7-8-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	NONE
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ABUTH W DESC
Stage Majority, Percent:	6
Stage Minimum, Percent:	2
Stage Maximum, Percent:	8
Height, Unit:	5 IN
Height Minimum, Maximum:	1 8
Density, Unit:	0.5 FT2
Pest 2 Code, Type, Scale:	IPOSS W DESC
Stage Majority, Percent:	6
Stage Minimum, Percent:	Coty
Stage Maximum, Percent:	12
Height, Unit:	5 IN
Height Minimum, Maximum:	1 8
Density, Unit:	0.5 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	ALTEVE
Nozzle Type:	See
Nozzle Size:	comment
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	10 GPA

Dicamba Nozzle by Adjuvants Study - Winfield Solutions.

Trial ID: 12-51E-S130
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ABUTH 7-11-12 Control Percent 7 DA-A	ABUTH 7-18-12 Control Percent 14 DA-A	ABUTH 8-1-12 Control Percent 28 DA-A	IPOSS 7-11-12 Control Percent 7 DA-A	IPOSS 7-18-12 Control Percent 14 DA-A	IPOSS 8-1-12 Control Percent 28 DA-A
1	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH									63 ab	69 a	68 abc	67 ab	78 a	85 ab
	CLARITY	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A						
2	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH									55 bcd	60 bcd	68 abc	63 b	73 ab	83 ab
	CLARITY	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A						
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A						
3	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH									58 abc	60 bcd	60 cd	68 a	73 ab	78 b
	CLARITY	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A						
4	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH									47 d	55 cd	65 bc	63 b	75 ab	84 ab
	CLARITY	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A						
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A						
5	COARSE AIXR 11004 @ 50 PSI 13.4 MPH									52 cd	53 d	60 cd	68 a	76 ab	84 ab
	CLARITY	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A						
6	COARSE AIXR 11004 @ 50 PSI 13.4 MPH									65 a	63 ab	67 bc	68 a	77 ab	88 a
	CLARITY	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A						
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A						
7	VC-XC AI 11004 @ 50 PSI 13.4 MPH									63 ab	65 ab	78 a	70 a	77 ab	85 ab
	CLARITY	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A						
8	VC-XC AI 11004 @ 50 PSI 13.4 MPH									60 abc	60 bcd	53 d	67 ab	75 ab	84 ab
	CLARITY	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A						
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A						
9	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH									62 ab	66 ab	75 ab	68 a	75 ab	81 b
	CLARITY	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A						
10	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH									60 abc	62 bc	64 c	67 a	70 b	85 ab
	CLARITY	4	SL	0.125	lb ae/a	4	fl oz/a	4-6"W	A						
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	4-6"W	A						
11	NONTREATED									0 e	0 e	0 e	0 c	0 c	0 c
LSD (P=.05)										9.5	7.0	10.5	3.9	7.6	6.7
Standard Deviation										5.6	4.1	6.2	2.3	4.5	3.9
CV										10.45	7.4	10.29	3.76	6.6	5.17
Replicate F										0.515	1.915	2.147	3.925	4.172	3.008
Replicate Prob(F)										0.6054	0.1734	0.1430	0.0365	0.0306	0.0721
Treatment F										33.132	64.017	34.848	236.474	76.391	124.799
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Dicamba Nozzle by Adjuvants Study - Winfield Solutions.

Trial ID: 12-51E-S130
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Winfield Solutions.
2. Ratings: CI/WC at 7, 14 and 28 DAT.
3. Nozzle type/size, application PSI, and application speed are per treatment, see treatment list.
4. IPOSS = Morningglory species 80% IPOHE (ivyleaf morningglory) and 20% PHBPU (tall morningglory).
5. Not harvested (non-crop).

Clethodim Nozzle by Adjuvant Study - Winfield Solutions.

Trial ID: 12-5D
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 6-4-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate the effect of Interlock and spray nozzles on the efficacy of grass control with clethodim.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 6-4-12
Planting Method: SEEDED Seeded **Rate, Unit:** 75 LB/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** SETFA - Setaria faberi Herrm.
Common Name: foxtail, giant

Pest 2 Type: W **Code:** PANDI - Panicum dichotomiflorum Michx.
Common Name: panicum, fall

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 40 FT
Plot Area, Unit: 400 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 150 LB/A

Soil Description

% OM: 1.7 **Texture:** SIL SILT LOAM
pH: 6.9 **Soil Name:** WINFIELD
CEC: 6

Additional Measured Elements

Element	Quantity	Unit
P1	96	LB/A
K	304	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Clethodim Nozzle by Adjuvant Study - Winfield Solutions.

Trial ID: 12-5D
Location: Belleville Res. Center
Investigator: Bryan Young

Application Description

	A
Application Date:	7-18-12
Time of Day:	7:00
Application Method:	Spray
Application Timing:	8"W
Application Placement:	BROFOL
Applied By:	JRK
Air Temperature, Unit:	81 F
% Relative Humidity:	79
Wind Velocity, Unit:	1 MPH
Wind Direction:	S
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	84 F
Soil Moisture:	BELNOR
% Cloud Cover:	80
Next Rain Occurred On:	7-29-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	R1
Stage Minimum, Percent:	V4
Stage Maximum, Percent:	R1
Height, Unit:	10 IN
Height Minimum, Maximum:	9 10

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	SETFA W DESC
Stage Majority, Percent:	7
Stage Minimum, Percent:	2
Stage Maximum, Percent:	14
Height, Unit:	8 IN
Height Minimum, Maximum:	2 12
Density, Unit:	1 FT2
Pest 2 Code, Type, Scale:	PANDI W DESC
Stage Majority, Percent:	6
Stage Minimum, Percent:	2
Stage Maximum, Percent:	10
Height, Unit:	6 IN
Height Minimum, Maximum:	2 12
Density, Unit:	0.8 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	ALTEVE
Nozzle Type:	See
Nozzle Size:	comment
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	10 GPA

Clethodim Nozzle by Adjuvant Study - Winfield Solutions.

Trial ID: 12-5D
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 7-25-12 Injury Percent 7 DA-A	GLXMA 8-1-12 Injury Percent 14 DA-A	GLXMA 8-15-12 Injury Percent 28 DA-A
	Pest Code											
	Crop Code											
	Rating Date											
	Rating Type											
	Rating Unit											
	Rating Timing											
	Trt-Eval Interval											
1	FINE TJ60 11003 @ 43.5 PSI									0 a	0 a	0 a
	9.4 MPH											
	ARROW	2	EC	0.0625	lb ai/a	4	fl oz/a	8"W	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	8"W	A			
2	FINE TJ60 11003 @ 43.5 PSI									0 a	0 a	0 a
	9.4 MPH											
	ARROW	2	EC	0.0625	lb ai/a	4	fl oz/a	8"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	8"W	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	8"W	A			
3	MEDIUM XR 11003 @ 43.5 PSI									0 a	0 a	0 a
	9.4 MPH											
	ARROW	2	EC	0.0625	lb ai/a	4	fl oz/a	8"W	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	8"W	A			
4	MEDIUM XR 11003 @ 43.5 PSI									0 a	0 a	0 a
	9.4 MPH											
	ARROW	2	EC	0.0625	lb ai/a	4	fl oz/a	8"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	8"W	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	8"W	A			
5	COARSE AIXR 11004 @ 50 PSI									0 a	0 a	0 a
	13.4 MPH											
	ARROW	2	EC	0.0625	lb ai/a	4	fl oz/a	8"W	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	8"W	A			
6	COARSE AIXR 11004 @ 50 PSI									0 a	0 a	0 a
	13.4 MPH											
	ARROW	2	EC	0.0625	lb ai/a	4	fl oz/a	8"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	8"W	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	8"W	A			
7	VC-XC AI 11004 @ 50 PSI									0 a	0 a	0 a
	13.4 MPH											
	ARROW	2	EC	0.0625	lb ai/a	4	fl oz/a	8"W	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	8"W	A			
8	VC-XC AI 11004 @ 50 PSI									0 a	0 a	0 a
	13.4 MPH											
	ARROW	2	EC	0.0625	lb ai/a	4	fl oz/a	8"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	8"W	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	8"W	A			
9	ULTRA COARSE TTI 11004 @ 43.5 PSI									0 a	0 a	0 a
	12.3 MPH											
	ARROW	2	EC	0.0625	lb ai/a	4	fl oz/a	8"W	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	8"W	A			
10	ULTRA COARSE TTI 11004 @ 43.5 PSI									0 a	0 a	0 a
	12.3 MPH											
	ARROW	2	EC	0.0625	lb ai/a	4	fl oz/a	8"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	8"W	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	8"W	A			
	LSD (P=.05)									0.0	0.0	0.0
	Standard Deviation									0.0	0.0	0.0
	CV									0.0	0.0	0.0
	Replicate F									0.000	0.000	0.000
	Replicate Prob(F)									1.0000	1.0000	1.0000
	Treatment F									0.000	0.000	0.000
	Treatment Prob(F)									1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Clethodim Nozzle by Adjuvant Study - Winfield Solutions.

Trial ID: 12-5D
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	SETFA 7-25-12 Control Percent 7 DA-A	SETFA 8-1-12 Control Percent 14 DA-A	SETFA 8-15-12 Control Percent 28 DA-A	PANDI 7-25-12 Control Percent 7 DA-A	PANDI 8-1-12 Control Percent 14 DA-A	PANDI 8-15-12 Control Percent 28 DA-A
1	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH									22 a	20 a	28 ab	22 a	20 a	23 a
	ARROW	2	EC	0.0625	lb ai/a	4	fl oz/a	8"W	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	8"W	A						
2	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH									27 a	19 a	22 c	27 a	19 a	20 a
	ARROW	2	EC	0.0625	lb ai/a	4	fl oz/a	8"W	A						
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	8"W	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	8"W	A						
3	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH									27 a	27 a	29 a	27 a	27 a	25 a
	ARROW	2	EC	0.0625	lb ai/a	4	fl oz/a	8"W	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	8"W	A						
4	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH									28 a	19 a	23 bc	28 a	19 a	22 a
	ARROW	2	EC	0.0625	lb ai/a	4	fl oz/a	8"W	A						
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	8"W	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	8"W	A						
5	COARSE AIXR 11004 @ 50 PSI 13.4 MPH									27 a	22 a	25 abc	27 a	25 a	20 a
	ARROW	2	EC	0.0625	lb ai/a	4	fl oz/a	8"W	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	8"W	A						
6	COARSE AIXR 11004 @ 50 PSI 13.4 MPH									25 a	22 a	29 a	25 a	22 a	25 a
	ARROW	2	EC	0.0625	lb ai/a	4	fl oz/a	8"W	A						
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	8"W	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	8"W	A						
7	VC-XC AI 11004 @ 50 PSI 13.4 MPH									27 a	18 a	22 c	27 a	18 a	19 a
	ARROW	2	EC	0.0625	lb ai/a	4	fl oz/a	8"W	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	8"W	A						
8	VC-XC AI 11004 @ 50 PSI 13.4 MPH									27 a	23 a	25 abc	27 a	23 a	23 a
	ARROW	2	EC	0.0625	lb ai/a	4	fl oz/a	8"W	A						
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	8"W	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	8"W	A						
9	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH									27 a	23 a	25 abc	27 a	23 a	22 a
	ARROW	2	EC	0.0625	lb ai/a	4	fl oz/a	8"W	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	8"W	A						
10	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH									27 a	22 a	23 bc	27 a	22 a	22 a
	ARROW	2	EC	0.0625	lb ai/a	4	fl oz/a	8"W	A						
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	8"W	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	8"W	A						
LSD (P=.05)										4.9	8.0	5.3	4.9	7.9	5.1
Standard Deviation										2.9	4.7	3.1	2.9	4.6	3.0
CV										10.97	21.84	12.19	10.97	21.23	13.47
Replicate F										3.135	2.104	0.131	3.135	3.170	1.502
Replicate Prob(F)										0.0679	0.1510	0.8781	0.0679	0.0661	0.2493
Treatment F										1.135	0.806	2.597	1.135	1.004	1.389
Treatment Prob(F)										0.3893	0.6165	0.0405	0.3893	0.4717	0.2637

Southern Illinois University

Clethodim Nozzle by Adjuvant Study - Winfield Solutions.

Trial ID: 12-5D
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Winfield Solutions.
2. Ratings: CI/WC at 7, 14 and 28 DAT.
3. Nozzle type/size, application PSI, and application speed are per treatment, see treatment list
4. Not harvested.

Southern Illinois University

Paraquat Corn Burndown Adjuvant Trial.

Trial ID: 12-KRC-ParaAdj
Location: Kuehn Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-2-12

Trial Location

City: Dowell
State/Prov.: IL
Postal Code: 62927
Country: USA

Objectives:
Evaluate the effect of WetCit on control of corn with paraquat
in a simulated replant.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 61-06 **Description:** RR2/LL
BBCH Scale: BCOR **Planting Date:** 5-2-12
Planting Method: SEEDED Seeded **Rate, Unit:** 28000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Code: NA

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N ___ LB/A, P2O5 __ LB/A, K2O ___ LB/A

Soil Description

Texture: SIL SILT LOAM

Additional Measured Elements

Element	Unit
P1	LB/A
K	LB/A

Southern Illinois University

Paraquat Corn Burndown Adjuvant Trial.

Trial ID: 12-KRC-ParaAdj
Location: Kuehn Res. Center
Investigator: Bryan Young

Application Description

	A	B
Application Date:	5-23-12	6-2-12
Time of Day:	16:30	8:00
Application Method:	Spray	Spray
Application Timing:	V4	V6
Application Placement:	BROFOL	BROFOL
Applied By:	JRK	LAH
Air Temperature, Unit:	89 F	65 F
% Relative Humidity:	26	63
Wind Velocity, Unit:	4 MPH	4 MPH
Wind Direction:	S	SW
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	81 F	60 F
Soil Moisture:	BELNOR	NORMAL
% Cloud Cover:	0	100

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	ZEAMD BCOR
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	V4	V6
Stage Minimum, Percent:	V3	V5
Stage Maximum, Percent:	V4	V6
Height, Unit:	8 IN	16 IN
Height Minimum, Maximum:	6 8	12 16

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	NA DESC	NA DESC
Stage Majority, Percent:	NA	NA

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8003	8003
Boom Length, Unit:	6.67 FT	6.67 FT
Spray Volume, Unit:	20 GPA	20 GPA

Paraquat Corn Burndown Adjuvant Trial.

Trial ID: 12-KRC-ParaAdj
Location: Kuehn Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD Control Percent 3 DAT	ZEAMD Control Percent 7 DAT	ZEAMD Control Percent 14 DAT	ZEAMD Plants 000/A 0 DAT	ZEAMD Plants 000/A 28 DAT
1	NONTREATED									0 d	0 d	0 e	30.0 a	30.0 a
2	PARAZONE	3	SL	1.01	lb ai/a	2.7	pt/a	V4	A	97 ab	97 b	99 ab	30.2 a	0.3 c
	METRIBUZIN 75 DF	75	WG	0.188	lb ai/a	4	oz/a	V4	A					
	CHEMSURF 80	100	SL	0.25	% v/v	0.25	% v/v	V4	A					
3	PARAZONE	3	SL	1.01	lb ai/a	2.7	pt/a	V4	A	94 c	96 c	98 abc	29.3 a	1.2 c
	METRIBUZIN 75 DF	75	WG	0.188	lb ai/a	4	oz/a	V4	A					
	WETCIT	100	SL	0.5	% v/v	0.5	% v/v	V4	A					
4	PARAZONE	3	SL	1.01	lb ai/a	2.7	pt/a	V4	A	96 ab	97 b	98 abc	29.5 a	0.3 c
	METRIBUZIN 75 DF	75	WG	0.188	lb ai/a	4	oz/a	V4	A					
	WETCIT	100	SL	1	% v/v	1	% v/v	V4	A					
5	PARAZONE	3	SL	1.01	lb ai/a	2.7	pt/a	V4	A	97 ab	97 b	99 a	29.5 a	0.0 c
	METRIBUZIN 75 DF	75	WG	0.188	lb ai/a	4	oz/a	V4	A					
	USIEX2142012	100	SL	0.25	% v/v	0.25	% v/v	V4	A					
6	PARAZONE	3	SL	1.01	lb ai/a	2.7	pt/a	V6	B	96 b	97 b	96 d	30.7 a	4.0 b
	METRIBUZIN 75 DF	75	WG	0.188	lb ai/a	4	oz/a	V6	B					
	CHEMSURF 80	100	SL	0.25	% v/v	0.25	% v/v	V6	B					
7	PARAZONE	3	SL	1.01	lb ai/a	2.7	pt/a	V6	B	96 ab	97 b	98 bc	29.2 a	0.3 c
	METRIBUZIN 75 DF	75	WG	0.188	lb ai/a	4	oz/a	V6	B					
	WETCIT	100	SL	0.5	% v/v	0.5	% v/v	V6	B					
8	PARAZONE	3	SL	1.01	lb ai/a	2.7	pt/a	V6	B	97 a	98 a	99 ab	30.0 a	0.0 c
	METRIBUZIN 75 DF	75	WG	0.188	lb ai/a	4	oz/a	V6	B					
	WETCIT	100	SL	1	% v/v	1	% v/v	V6	B					
9	PARAZONE	3	SL	1.01	lb ai/a	2.7	pt/a	V6	B	96 b	97 b	97 cd	29.2 a	1.5 c
	METRIBUZIN 75 DF	75	WG	0.188	lb ai/a	4	oz/a	V6	B					
	USIEX2142012	100	SL	0.25	% v/v	0.25	% v/v	V6	B					
LSD (P=.05)										1.6	0.9	1.3	3.01	1.98
Standard Deviation										0.9	0.5	0.8	1.74	1.15
CV										1.11	0.64	0.88	5.85	27.36
Replicate F										0.165	1.969	1.000	0.083	1.214
Replicate Prob(F)										0.8494	0.1720	0.3897	0.9210	0.3228
Treatment F										3430.093	10445.108	5410.282	0.262	217.993
Treatment Prob(F)										0.0001	0.0001	0.0001	0.9696	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Paraquat Corn Burndown Adjuvant Trial.

Trial ID: 12-KRC-ParaAdj
Location: Kuehn Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: United Suppliers.
2. Ratings: Percent corn injury and control at 3, 7, and 14 DAT.
   Stand counts from 17 ft 5 inch from 2 center rows prior to application and 28 DAT.
3. Keep plots weed free and monitor any living corn plants for ear development.
4. Not harvested.

No-Till Corn Weed Control Studies

Southern Illinois University

No-Till Corn Herbicide Programs.

Trial ID: 12-1-MW90
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-26-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate the performance of various competitive burndown
and residual herbicide programs for use in no-till corn.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 61-06 **Description:** RR2/LL
BBCH Scale: BCOR **Planting Date:** 5-18-12
Planting Method: SEEDED Seeded **Rate, Unit:** 28000 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMBTR - Ambrosia trifida L.
Common Name: ragweed, giant

Pest 2 Type: W **Code:** AMBEL - Ambrosia artemisiifolia L.
Common Name: ragweed, common

Pest 3 Type: W **Code:** PANDI - Panicum dichotomiflorum Michx.
Common Name: panicum, fall

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 27 FT
Plot Area, Unit: 270 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 150 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 1.5 **Texture:** SIL SILT LOAM
pH: 6.4 **Soil Name:** WINFIELD
CEC: 6

Additional Measured Elements

Element	Quantity	Unit
P1	72	LB/A
K	313	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

No-Till Corn Herbicide Programs.

Trial ID: 12-1-MW90
Location: Belleville Res. Center
Investigator: Bryan Young

Application Description

	A	B	C	D	E	F	G
Application Date:	4-26-12	5-11-12	5-18-12	6-8-12	5-29-12	6-29-12	6-20-12
Time of Day:	8:00	9:00	14:00	9:45	16:00	9:00	8:00
Application Method:	Spray	Spray	Spray	Spray	Spray	Spray	Spray
Application Timing:	21DBP	7DBP	PRE	2-4"W	4-6"W-1	42DAP	4-6"W-2
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	RFK	RFK	LAH	JRK	JRK	JRK	RFK
Air Temperature, Unit:	69 F	69 F	86 F	81 F	88 F	92 F	82 F
% Relative Humidity:	66	44	31	35	30	41	58
Wind Velocity, Unit:	5 MPH	3 MPH	3 MPH	1 MPH	1 MPH	1 MPH	6 MPH
Wind Direction:	N	SE	E	E	W	W	S
Dew Presence (Y/N):	N no	N no	N no	N no	N no	N no	N no
Soil Temperature, Unit:	62 F	68 F	63 F	72 F	68 F	79 F	77 F
Soil Moisture:	NORMAL	ABONOR	NORMAL	BELNOR	BELNOR	BELNOR	NORMAL
Next Rain Occurred On:	4-29-12	5-21-12	5-21-12	6-11-12	5-31-12	7-8-12	7-8-12

Crop Stage At Each Application

	A	B	C	D	E	F	G
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR
Stage Scale Used:	DESC	DESC	DESC	DESC	DESC	DESC	DESC
Stage Majority, Percent:	NA	NA	NA	V5	V3	V9	V7
Stage Minimum, Percent:				V4	V2	V8	V6
Stage Maximum, Percent:				V5	V3	V9	V7
Height, Unit:				12 IN	6 IN	30 IN	22 IN
Height Minimum, Maximum:				10 12	4 6	26 30	18 22

Pest Stage At Each Application

	A	B	C	D	E	F
Pest 1 Code, Type, Scale:	AMBTR W DESC	AMBTR W DESC	AMBTR W DESC	AMBTR W DESC	AMBTR W DESC	AMBTR W DESC
Stage Majority, Percent:	8	8	10	NA	NA	NA
Stage Minimum, Percent:	4	4	6			
Stage Maximum, Percent:	8	10	16			
Height, Unit:	4 IN	6 IN	14 IN			
Height Minimum, Maximum:	4 6	4 10	8 24			
Density, Unit:	0.1 FT2	0.1 FT2	0.1 FT2			
Pest 2 Code, Type, Scale:	AMBEL W DESC	AMBEL W DESC	AMBEL W DESC	AMBEL W DESC	AMBEL W DESC	AMBEL W DESC
Stage Majority, Percent:	6	6	10	4	NA	NA
Stage Minimum, Percent:	5	5	6	2		
Stage Maximum, Percent:	6	6	18	6		
Height, Unit:	4 IN	6 IN	8 IN	2 IN		
Height Minimum, Maximum:	4 6	4 8	4 14	1 3		
Density, Unit:	0.01 FT2	0.01 FT2	0.1 FT2	0.001 FT2		
Pest 3 Code, Type, Scale:	PANDI W DESC	PANDI W DESC	PANDI W DESC	PANDI W DESC	PANDI W DESC	PANDI W DESC
Stage Majority, Percent:	NA	4	4	NA	4	5
Stage Minimum, Percent:		3	3		3	3
Stage Maximum, Percent:		4	4		5	12
Height, Unit:		4 IN	7 IN		5 IN	5 IN
Height Minimum, Maximum:		3 5	3 9		2 9	3 12
Density, Unit:		0.01 FT2	0.01 FT2		0.01 FT2	0.01 FT2

No-Till Corn Herbicide Programs.

Trial ID: 12-1-MW90
Location: Belleville Res. Center
Investigator: Bryan Young

	G
Pest 1 Code, Type, Scale:	AMBTR W DESC
Stage Majority, Percent:	NA
Stage Minimum, Percent:	
Stage Maximum, Percent:	
Height, Unit:	
Height Minimum, Maximum:	
Density, Unit:	
Pest 2 Code, Type, Scale:	AMBEL W DESC
Stage Majority, Percent:	NA
Stage Minimum, Percent:	
Stage Maximum, Percent:	
Height, Unit:	
Height Minimum, Maximum:	
Density, Unit:	
Pest 3 Code, Type, Scale:	PANDI W DESC
Stage Majority, Percent:	10+
Stage Minimum, Percent:	3
Stage Maximum, Percent:	10+
Height, Unit:	6 IN
Height Minimum, Maximum:	2 10
Density, Unit:	0.001 FT2

Application Equipment

	A	B	C	D	E	F
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR	XR	XR	XR
Nozzle Size:	8002	8002	8002	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA	15 GPA	15 GPA

	G
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

No-Till Corn Herbicide Programs.

Trial ID: 12-1-MW90
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 5-25-12 Injury Percent 14 DA-B	ZEAMD 6-1-12 Injury Percent 14 DAP	ZEAMD 6-15-12 Injury Percent 28 DAP	ZEAMD 6-29-12 Injury Percent 42 DAP	ZEAMD 7-12-12 Injury Percent 56 DAP
1	NONTREATED									0 a	0 a	0 a	0 a	0 a
2	SURESTART	4.25	SE	1.6	lb ai/a	3	pt/a	21DBP	A	0 a	0 a	0 a	0 a	0 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	21DBP	A					
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	21DBP	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	21DBP	A					
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	4-6"W-1	E					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-1	E					
3	SURESTART	4.25	SE	1.6	lb ai/a	3	pt/a	21DBP	A	0 a	0 a	0 a	0 a	0 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	21DBP	A					
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	21DBP	A					
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	21DBP	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	21DBP	A					
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	4-6"W-1	E					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-1	E					
4	KEYSTONE	5.25	SE	3.4	lb ai/a	2.6	qt/a	PRE	C	0 a	0 a	0 a	0 a	0 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	PRE	C					
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	PRE	C					
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	PRE	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C					
5	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	PRE	C	0 a	0 a	0 a	0 a	0 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	PRE	C					
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	PRE	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C					
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	4-6"W-2	G					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-2	G					
6	SURESTART	4.25	SE	1.33	lb ai/a	2.5	pt/a	PRE	C	0 a	0 a	0 a	0 a	0 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	PRE	C					
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	PRE	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C					
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	4-6"W-2	G					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-2	G					
7	SURESTART	4.25	SE	1.33	lb ai/a	2.5	pt/a	PRE	C	0 a	0 a	0 a	0 a	0 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	PRE	C					
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	PRE	C					
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	PRE	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C					
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	4-6"W-2	G					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-2	G					
8	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	PRE	C	0 a	0 a	0 a	0 a	0 a
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	PRE	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C					
	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	D					
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W	D					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	D					
9	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	0 a	0 a	0 a	0 a	0 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	B					
10	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	0 a	0 a	0 a	0 a	0 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B					
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	7DBP	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	B					

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

No-Till Corn Herbicide Programs.

Trial ID: 12-1-MW90
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 5-25-12 Injury Percent 14 DA-B	ZEAMD 6-1-12 Injury Percent 14 DAP	ZEAMD 6-15-12 Injury Percent 28 DAP	ZEAMD 6-29-12 Injury Percent 42 DAP	ZEAMD 7-12-12 Injury Percent 56 DAP
11	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	0 a	0 a	0 a	0 a	0 a
	SHARPEN	2.85	SC	0.067	lb ai/a	3	fl oz/a	7DBP	B					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	7DBP	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	B					
12	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	0 a	0 a	0 a	0 a	0 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B					
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	7DBP	B					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B					
13	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	0 a	0 a	0 a	0 a	0 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B					
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	7DBP	B					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B					
14	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	7DBP	B	0 a	0 a	0 a	0 a	0 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B					
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	7DBP	B					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B					
15	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	7DBP	B	0 a	0 a	0 a	0 a	0 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B					
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	7DBP	B					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B					
16	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	0 a	0 a	0 a	0 a	0 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B					
17	LEXAR	3.7	SC	2.78	lb ai/a	3	qt/a	7DBP	B	0 a	0 a	0 a	0 a	0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	7DBP	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	B					
18	HARNESS XTRA 5.6	5.6	EC	4.2	lb ai/a	3	qt/a	7DBP	B	0 a	0 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	B					
19	NONTREATED									0 a	0 a	0 a	0 a	0 a
20	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B	0 a	0 a	0 a	0 a	0 a
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	B					
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	7DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	F					
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	42DAP	F					
21	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B	0 a	0 a	0 a	0 a	0 a
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	B					
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B					
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	7DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	F					
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	42DAP	F					
22	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B	0 a	0 a	0 a	0 a	0 a
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	B					
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	7DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	F					
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	42DAP	F					
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	42DAP	F					

No-Till Corn Herbicide Programs.

Trial ID: 12-1-MW90
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 5-25-12 Injury Percent 14 DA-B	ZEAMD 6-1-12 Injury Percent 14 DAP	ZEAMD 6-15-12 Injury Percent 28 DAP	ZEAMD 6-29-12 Injury Percent 42 DAP	ZEAMD 7-12-12 Injury Percent 56 DAP
23	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	C	0 a	0 a	0 a	0 a	0 a
	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	C					
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	PRE	C					
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	PRE	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	F					
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	42DAP	F					
24	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	7DBP	B	0 a	0 a	0 a	0 a	0 a
	LEXAR	3.7	SC	2.78	lb ai/a	3	qt/a	7DBP	B					
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B					
LSD (P=.05)										0.0	0.0	0.0	0.0	0.0
Standard Deviation										0.0	0.0	0.0	0.0	0.0
CV										0.0	0.0	0.0	0.0	0.0
Replicate F										0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000

No-Till Corn Herbicide Programs.

Trial ID: 12-1-MW90
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 5-25-12 Control Percent 14 DA-B	AMBTR 6-15-12 Control Percent 28 DAP	AMBTR 6-29-12 Control Percent 42 DAP	AMBTR 7-12-12 Control Percent 56 DAP
1	NONTREATED									0 d	0 d	0 e	0 d
2	SURESTART	4.25	SE	1.6	lb ai/a	3	pt/a	21DBP	A	98 a	99 ab	99 a	99 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	21DBP	A				
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	21DBP	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	21DBP	A				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	4-6"W-1	E				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-1	E				
3	SURESTART	4.25	SE	1.6	lb ai/a	3	pt/a	21DBP	A	99 a	99 a	98 ab	98 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	21DBP	A				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	21DBP	A				
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	21DBP	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	21DBP	A				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	4-6"W-1	E				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-1	E				
4	KEYSTONE	5.25	SE	3.4	lb ai/a	2.6	qt/a	PRE	C	90 a	99 a	99 a	99 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	PRE	C				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	PRE	C				
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
5	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	PRE	C	91 a	99 a	99 a	99 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	PRE	C				
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	4-6"W-2	G				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-2	G				
6	SURESTART	4.25	SE	1.33	lb ai/a	2.5	pt/a	PRE	C	93 a	99 a	99 a	99 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	PRE	C				
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	4-6"W-2	G				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-2	G				
7	SURESTART	4.25	SE	1.33	lb ai/a	2.5	pt/a	PRE	C	95 a	99 a	99 a	99 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	PRE	C				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	PRE	C				
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	4-6"W-2	G				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-2	G				
8	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	PRE	C	70 b	99 a	99 a	99 a
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	D				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	D				
9	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	95 a	99 a	99 a	99 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	B				
10	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	98 a	99 a	99 a	99 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	7DBP	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	B				

No-Till Corn Herbicide Programs.

Trial ID: 12-1-MW90
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 5-25-12 Control Percent 14 DA-B	AMBTR 6-15-12 Control Percent 28 DAP	AMBTR 6-29-12 Control Percent 42 DAP	AMBTR 7-12-12 Control Percent 56 DAP
11	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	99 a	98 ab	98 a	99 a
	SHARPEN	2.85	SC	0.067	lb ai/a	3	fl oz/a	7DBP	B				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	7DBP	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	B				
12	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	98 a	99 a	99 a	99 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	7DBP	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B				
13	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	99 a	99 a	99 a	99 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	7DBP	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B				
14	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	7DBP	B	99 a	99 a	99 a	99 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	7DBP	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B				
15	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	7DBP	B	98 a	99 a	99 a	99 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	7DBP	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B				
16	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	99 a	99 a	99 a	99 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B				
17	LEXAR	3.7	SC	2.78	lb ai/a	3	qt/a	7DBP	B	99 a	99 a	99 a	99 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	7DBP	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	B				
18	HARNESS XTRA 5.6	5.6	EC	4.2	lb ai/a	3	qt/a	7DBP	B	99 a	99 ab	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	B				
19	NONTREATED									0 d	0 d	0 e	0 d
20	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B	94 a	88 c	95 c	93 c
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	B				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	F				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	42DAP	F				
21	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B	98 a	98 ab	97 b	98 a
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	B				
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	F				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	42DAP	F				
22	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B	98 a	88 c	94 d	95 b
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	B				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	F				
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	42DAP	F				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	42DAP	F				

No-Till Corn Herbicide Programs.

Trial ID: 12-1-MW90
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 5-25-12 Control Percent 14 DA-B	AMBTR 6-15-12 Control Percent 28 DAP	AMBTR 6-29-12 Control Percent 42 DAP	AMBTR 7-12-12 Control Percent 56 DAP
23	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	C	57 c	97 b	99 a	99 a
	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	C				
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	PRE	C				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	F				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	42DAP	F				
24	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	7DBP	B	99 a	99 a	98 ab	99 a
	LEXAR	3.7	SC	2.78	lb ai/a	3	qt/a	7DBP	B				
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B				
LSD (P=.05)										9.3	2.1	1.1	1.4
Standard Deviation										5.7	1.3	0.7	0.9
CV										6.57	1.43	0.74	0.95
Replicate F										0.045	0.485	0.647	0.528
Replicate Prob(F)										0.9563	0.6188	0.5285	0.5934
Treatment F										75.327	1416.778	5141.270	3155.712
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

No-Till Corn Herbicide Programs.

Trial ID: 12-1-MW90
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBEL 5-25-12 Control Percent 14 DA-B	AMBEL 6-15-12 Control Percent 28 DAP	AMBEL 6-29-12 Control Percent 42 DAP	AMBEL 7-12-12 Control Percent 56 DAP
1	NONTREATED									0 d	0 b	0 c	0 c
2	SURESTART	4.25	SE	1.6	lb ai/a	3	pt/a	21DBP	A	99 a	99 a	99 a	99 ab
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	21DBP	A				
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	21DBP	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	21DBP	A				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	4-6"W-1	E				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-1	E				
3	SURESTART	4.25	SE	1.6	lb ai/a	3	pt/a	21DBP	A	99 a	99 a	99 a	99 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	21DBP	A				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	21DBP	A				
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	21DBP	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	21DBP	A				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	4-6"W-1	E				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-1	E				
4	KEYSTONE	5.25	SE	3.4	lb ai/a	2.6	qt/a	PRE	C	96 ab	99 a	99 a	99 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	PRE	C				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	PRE	C				
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
5	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	PRE	C	98 a	99 a	99 a	99 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	PRE	C				
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	4-6"W-2	G				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-2	G				
6	SURESTART	4.25	SE	1.33	lb ai/a	2.5	pt/a	PRE	C	99 a	99 a	99 a	99 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	PRE	C				
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	4-6"W-2	G				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-2	G				
7	SURESTART	4.25	SE	1.33	lb ai/a	2.5	pt/a	PRE	C	98 a	99 a	99 a	99 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	PRE	C				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	PRE	C				
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	4-6"W-2	G				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-2	G				
8	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	PRE	C	82 c	99 a	99 a	99 a
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	D				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	D				
9	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	99 a	99 a	99 a	99 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	B				
10	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	99 a	99 a	99 a	99 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	7DBP	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	B				

No-Till Corn Herbicide Programs.

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Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBEL 5-25-12 Control Percent 14 DA-B	AMBEL 6-15-12 Control Percent 28 DAP	AMBEL 6-29-12 Control Percent 42 DAP	AMBEL 7-12-12 Control Percent 56 DAP
11	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	99 a	99 a	99 a	99 a
	SHARPEN	2.85	SC	0.067	lb ai/a	3	fl oz/a	7DBP	B				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	7DBP	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	B				
12	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	99 a	99 a	99 a	99 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	7DBP	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B				
13	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	99 a	99 a	99 a	99 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	7DBP	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B				
14	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	7DBP	B	99 a	99 a	99 a	99 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	7DBP	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B				
15	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	7DBP	B	99 a	99 a	99 a	99 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	7DBP	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B				
16	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	99 a	99 a	99 a	99 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B				
17	LEXAR	3.7	SC	2.78	lb ai/a	3	qt/a	7DBP	B	99 a	99 a	99 a	99 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	7DBP	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	B				
18	HARNESS XTRA 5.6	5.6	EC	4.2	lb ai/a	3	qt/a	7DBP	B	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	B				
19	NONTREATED									0 d	0 b	0 c	0 c
20	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B	98 a	99 a	98 b	98 b
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	B				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	F				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	42DAP	F				
21	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B	99 a	99 a	99 a	99 a
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	B				
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	F				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	42DAP	F				
22	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B	99 a	99 a	99 a	99 a
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	B				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	F				
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	42DAP	F				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	42DAP	F				

No-Till Corn Herbicide Programs.

Trial ID: 12-1-MW90
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBEL	AMBEL	AMBEL	AMBEL
	Pest Code									AMBEL	AMBEL	AMBEL	AMBEL
	Crop Code												
	Rating Date									5-25-12	6-15-12	6-29-12	7-12-12
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing												
	Trt-Eval Interval									14 DA-B	28 DAP	42 DAP	56 DAP
23	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	C	92 b	99 a	99 a	99 a
	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	C				
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	PRE	C				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	F				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	42DAP	F				
24	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	7DBP	B	99 a	99 a	99 a	99 a
	LEXAR	3.7	SC	2.78	lb ai/a	3	qt/a	7DBP	B				
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B				
	LSD (P=.05)									5.1	0.0	0.4	0.4
	Standard Deviation									3.1	0.0	0.2	0.3
	CV									3.47	0.0	0.26	0.29
	Replicate F									0.780	0.000	1.000	0.590
	Replicate Prob(F)									0.4643	1.0000	0.3757	0.5586
	Treatment F									240.963	0.000	42162.090	33143.105
	Treatment Prob(F)									0.0001	1.0000	0.0001	0.0001

No-Till Corn Herbicide Programs.

Trial ID: 12-1-MW90
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	PANDI 5-25-12 Control Percent 14 DA-B	PANDI 6-15-12 Control Percent 28 DAP	PANDI 6-29-12 Control Percent 42 DAP	PANDI 7-12-12 Control Percent 56 DAP
1	NONTREATED									0 e	0 g	0 g	0 f
2	SURESTART	4.25	SE	1.6	lb ai/a	3	pt/a	21DBP	A	97 bc	99 a	98 a	96 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	21DBP	A				
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	21DBP	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	21DBP	A				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	4-6"W-1	E				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-1	E				
3	SURESTART	4.25	SE	1.6	lb ai/a	3	pt/a	21DBP	A	94 d	99 a	98 a	96 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	21DBP	A				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	21DBP	A				
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	21DBP	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	21DBP	A				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	4-6"W-1	E				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-1	E				
4	KEYSTONE	5.25	SE	3.4	lb ai/a	2.6	qt/a	PRE	C	99 a	92 a-e	95 ab	93 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	PRE	C				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	PRE	C				
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
5	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	PRE	C	99 a	96 a-d	99 a	99 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	PRE	C				
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	4-6"W-2	G				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-2	G				
6	SURESTART	4.25	SE	1.33	lb ai/a	2.5	pt/a	PRE	C	99 a	97 abc	99 a	99 a
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	PRE	C				
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	4-6"W-2	G				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-2	G				
7	SURESTART	4.25	SE	1.33	lb ai/a	2.5	pt/a	PRE	C	99 a	98 a	99 a	99 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	PRE	C				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	PRE	C				
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	4-6"W-2	G				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	4-6"W-2	G				
8	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	PRE	C	99 a	99 a	99 a	99 a
	2,4-D AMINE 4	3.8	SL	0.475	lb ae/a	1	pt/a	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W	D				
	DURANGO DMA	4	SL	0.75	lb ae/a	1.5	pt/a	2-4"W	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W	D				
9	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	99 a	97 abc	96 ab	95 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	B				
10	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	99 a	97 ab	95 ab	94 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	7DBP	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	B				

No-Till Corn Herbicide Programs.

Trial ID: 12-1-MW90
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	PANDI 5-25-12 Control Percent 14 DA-B	PANDI 6-15-12 Control Percent 28 DAP	PANDI 6-29-12 Control Percent 42 DAP	PANDI 7-12-12 Control Percent 56 DAP
11	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	99 a	88 e	95 ab	91 abc
	SHARPEN	2.85	SC	0.067	lb ai/a	3	fl oz/a	7DBP	B				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	7DBP	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	B				
12	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	99 a	89 de	94 abc	91 ab
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	7DBP	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B				
13	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	99 a	92 a-e	96 ab	93 a
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	7DBP	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B				
14	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	7DBP	B	96 bc	72 f	75 f	68 e
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	7DBP	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B				
15	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	7DBP	B	96 c	72 f	75 f	80 d
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	7DBP	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B				
16	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	7DBP	B	99 a	91 b-e	95 abc	92 ab
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B				
17	LEXAR	3.7	SC	2.78	lb ai/a	3	qt/a	7DBP	B	99 a	93 a-e	87 de	78 d
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	7DBP	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	B				
18	HARNESS XTRA 5.6	5.6	EC	4.2	lb ai/a	3	qt/a	7DBP	B	99 a	95 a-d	91 bcd	82 cd
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	B				
19	NONTREATED									0 e	0 g	0 g	0 f
20	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B	99 a	93 a-e	89 cd	96 a
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	B				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	F				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	42DAP	F				
21	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B	99 a	95 a-d	92 bcd	96 a
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	B				
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	F				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	42DAP	F				
22	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B	99 a	90 cde	83 e	94 a
	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	7DBP	B				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	F				
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	42DAP	F				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	42DAP	F				

No-Till Corn Herbicide Programs.

Trial ID: 12-1-MW90
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	PANDI	PANDI	PANDI	PANDI
	Pest Code									PANDI	PANDI	PANDI	PANDI
	Crop Code												
	Rating Date									5-25-12	6-15-12	6-29-12	7-12-12
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing												
	Trt-Eval Interval									14 DA-B	28 DAP	42 DAP	56 DAP
23	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	C	98 ab	96 a-d	96 ab	96 a
	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	C				
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	PRE	C				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	42DAP	F				
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	42DAP	F				
24	GRAMOXONE 2 SL	2	SL	0.75	lb ai/a	48	fl oz/a	7DBP	B	99 a	93 a-e	92 bcd	83 bcd
	LEXAR	3.7	SC	2.78	lb ai/a	3	qt/a	7DBP	B				
	AATREX NINE-O	90	WG	1	lb ai/a	1.11	lb/a	7DBP	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	7DBP	B				
	LSD (P=.05)									1.6	7.0	5.6	9.3
	Standard Deviation									0.9	4.3	3.4	5.6
	CV									1.04	5.04	4.01	6.74
	Replicate F									0.673	1.794	0.511	1.833
	Replicate Prob(F)									0.5150	0.1778	0.6030	0.1714
	Treatment F									2613.239	120.549	188.535	68.130
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

Southern Illinois University

No-Till Corn Herbicide Programs.

Trial ID: 12-1-MW90
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Dow, Bayer (BLL), Valent (Fierce MD68.01), Syngenta.
2. Ratings: CI at 14 DA-B, 14 and 28 DAP. WC at 14 DA-B, 28, 42, and 56 DAP.
3. Percent ground cover by species at application B in nontreated plots.
4. Photos.
5. If CI observed, please describe symptoms (there was no crop injury observed at any time).
6. No yield.
7. Rainfall following the 21DBP application was 3.06 inch 3 days later.
   Rainfall following the 7DBP application was 0.18 inch 10 days later then 0.28 inch 20 days later.
   Rainfall following the PRE application was 0.18 inch 3 days later then 0.28 inch 13 days later.
8. Ground cover at application B in the nontreated plots was;
   AMBTR 7%, AMBEL 2%, and PANDI 1%.
   Also present were winter annuals; ALOCA 5%, STEME 10%, SENGL 1%, and VERPG 5%.
9. Not harvested.

Southern Illinois University

Evaluation of NUP-12004 for Preplant and Preemergence Burndown Applications in No-Till Corn.

Trial ID: 12-1-MMW40
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-26-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate efficacy of NUP-12004 for the burndown of annual braodleaf weeds when applied 7 days prior to planting field corn and 3 to 5 days after corn planting.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 61-06 **Description:** RR2/LL
BBCH Scale: BCOR **Planting Date:** 5-11-12
Planting Method: SEEDED Seeded **Rate, Unit:** 28000 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMBTR - Ambrosia trifida L.
Common Name: ragweed, giant

Pest 2 Type: W **Code:** AMBEL - Ambrosia artemisiifolia L.
Common Name: ragweed, common

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 27 FT
Plot Area, Unit: 270 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 150 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 1.5 **Texture:** SIL SILT LOAM
pH: 6.4 **Soil Name:** WINFIELD
CEC: 6

Additional Measured Elements

Element	Quantity	Unit
P1	72	LB/A
K	313	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Southern Illinois University

Evaluation of NUP-12004 for Preplant and Preemergence Burndown Applications in No-Till Corn.

Trial ID: 12-1-MMW40
Location: Belleville Res. Center
Investigator: Bryan Young

Application Description

	A	B
Application Date:	4-26-12	5-14-12
Time of Day:	8:00	7:00
Application Method:	Spray	Spray
Application Timing:	7DBP	3-5DAP
Application Placement:	BROFOL	BROFOL
Applied By:	RFK	RFK
Air Temperature, Unit:	69 F	60 F
% Relative Humidity:	66	50
Wind Velocity, Unit:	5 MPH	3 MPH
Wind Direction:	S	N
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	62 F	65 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	0	0
Next Rain Occurred On:	4-29-12	5-21-12

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	ZEAMD BCOR
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	NA

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMBTR W DESC	AMBTR W DESC
Stage Majority, Percent:	8	10+
Stage Minimum, Percent:	4	8
Stage Maximum, Percent:	8	10+
Height, Unit:	4 IN	10 IN
Height Minimum, Maximum:	4 6	6 12
Density, Unit:	0.1 FT2	0.1 FT2
Pest 2 Code, Type, Scale:	AMBEL W DESC	AMBEL W DESC
Stage Majority, Percent:	6	8
Stage Minimum, Percent:	5	8
Stage Maximum, Percent:	6	10
Height, Unit:	4 IN	6 IN
Height Minimum, Maximum:	4 6	4 8
Density, Unit:	0.01 FT2	0.01 FT2

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA

Southern Illinois University

Evaluation of NUP-12004 for Preplant and Preemergence Burndown Applications in No-Till Corn.

Trial ID: 12-1-MMW40
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD Necrosis Percent 14 DAT	ZEAMD Necrosis Percent 28 DAT	ZEAMD Epinasty Percent 14 DAT	ZEAMD Epinasty Percent 28 DAT
	Pest Code												
	Crop Code									ZEAMD	ZEAMD	ZEAMD	ZEAMD
	Rating Date												
	Rating Type									Necrosis	Necrosis	Epinasty	Epinasty
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing												
	Trt-Eval Interval									14 DAT	28 DAT	14 DAT	28 DAT
1	NONTREATED									0 a	0 a	0 a	0 a
2	NUP-12004	3.52	EC	0.33	lb ae/a	12	fl oz/a	7DBP	A		0 a		0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A				
3	NUP-12004	3.52	EC	0.495	lb ae/a	18	fl oz/a	7DBP	A		0 a		0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A				
4	WEEDONE LV 4 EC	3.84	EC	0.48	lb ae/a	16	fl oz/a	7DBP	A		0 a		0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A				
5	WEEDONE LV 4 EC	3.84	EC	0.66	lb ae/a	22	fl oz/a	7DBP	A		0 a		0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A				
6	NONTREATED									0 a	0 a	0 a	0 a
7	NUP-12004	3.52	EC	0.33	lb ae/a	12	fl oz/a	3-5DAP	B	0 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	3-5DAP	B				
8	NUP-12004	3.52	EC	0.495	lb ae/a	18	fl oz/a	3-5DAP	B	0 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	3-5DAP	B				
9	WEEDONE LV 4 EC	3.84	EC	0.48	lb ae/a	16	fl oz/a	3-5DAP	B	0 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	3-5DAP	B				
10	WEEDONE LV 4 EC	3.84	EC	0.66	lb ae/a	22	fl oz/a	3-5DAP	B	0 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	3-5DAP	B				
	LSD (P=.05)									0.0	0.0	0.0	0.0
	Standard Deviation									0.0	0.0	0.0	0.0
	CV									0.0	0.0	0.0	0.0
	Replicate F									0.000	0.000	0.000	0.000
	Replicate Prob(F)									1.0000	1.0000	1.0000	1.0000
	Treatment F									0.000	0.000	0.000	0.000
	Treatment Prob(F)									1.0000	1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Evaluation of NUP-12004 for Preplant and Preemergence Burndown Applications in No-Till Corn.

Trial ID: 12-1-MMW40
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR Control Percent 3 DAT	AMBTR Control Percent 7 DAT	AMBTR Control Percent 14 DAT	AMBTR Control Percent 28 DAT	AMBEL Control Percent 3 DAT	AMBEL Control Percent 7 DAT	AMBEL Control Percent 14 DAT	AMBEL Control Percent 28 DAT
1	NONTREATED									0 e	0 d	0 e	0 b	0 d	0 d	0 d	0 b
2	NUP-12004	3.52	EC	0.33	lb ae/a	12	fl oz/a	7DBP	A	90 a	99 a	99 a	96 a	90 a	99 a	99 a	98 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A								
3	NUP-12004	3.52	EC	0.495	lb ae/a	18	fl oz/a	7DBP	A	90 a	99 a	99 a	96 a	90 a	99 a	99 a	98 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A								
4	WEEDONE LV 4 EC	3.84	EC	0.48	lb ae/a	16	fl oz/a	7DBP	A	90 a	99 a	99 a	98 a	90 a	99 a	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A								
5	WEEDONE LV 4 EC	3.84	EC	0.66	lb ae/a	22	fl oz/a	7DBP	A	90 a	99 a	99 a	99 a	90 a	99 a	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A								
6	NONTREATED									0 e	0 d	0 e	0 b	0 d	0 d	0 d	0 b
7	NUP-12004	3.52	EC	0.33	lb ae/a	12	fl oz/a	3-5DAP	B	50 c	57 bc	77 c	99 a	57 b	63 b	80 b	99 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	3-5DAP	B								
8	NUP-12004	3.52	EC	0.495	lb ae/a	18	fl oz/a	3-5DAP	B	62 b	67 b	83 b	98 a	60 b	63 b	83 b	99 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	3-5DAP	B								
9	WEEDONE LV 4 EC	3.84	EC	0.48	lb ae/a	16	fl oz/a	3-5DAP	B	32 d	47 c	67 d	99 a	33 c	37 c	65 c	99 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	3-5DAP	B								
10	WEEDONE LV 4 EC	3.84	EC	0.66	lb ae/a	22	fl oz/a	3-5DAP	B	38 d	50 c	80 bc	99 a	43 c	47 c	80 b	99 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	3-5DAP	B								
LSD (P=.05)										7.9	10.4	5.7	4.3	11.9	11.3	9.6	1.7
Standard Deviation										4.6	6.1	3.3	2.5	7.0	6.6	5.6	1.0
CV										8.46	9.83	4.72	3.2	12.59	10.91	7.95	1.23
Replicate F										1.705	1.909	2.345	1.295	3.366	0.915	2.416	2.250
Replicate Prob(F)										0.2099	0.1770	0.1245	0.2983	0.0573	0.4183	0.1176	0.1342
Treatment F										187.687	123.561	408.301	814.694	79.573	106.969	144.052	5476.938
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Evaluation of NUP-12004 for Preplant and Preemergence Burndown Applications in No-Till Corn.

Trial ID: 12-1-MMW40
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Nufarm (H 2012-101-IL; H 2012-102-IL).
2. Ratings: CI; Distinguish between necrosis and epinasty and evaluate at 14 and 28 DA-A (trts 1-5) and 14 and 28 DA-B (trts 6-10).
   WC at 3, 7 14, and 28 DA-A (trts 1-5) and 3, 7 14, and 28 DA-B (trts 6-10).
3. Ideally, weed heights should be less than 4 inch in size.
4. Take digital photos to demonstrate treatment differences.
5. Rainfall following the 7DBP application was; 3.06 inch 3 days later, 0.66 inch 4 days later, 0.13 inch 5 days later, 0.25 inch 8 days later, and 0.29 inch 11 days later.
6. The planned May 3 planting date was delayed due to wet soil conditions, thus it was not possible to rate crop injury at 14 days after the 7DBP application.
   There was no observable crop injury at any time.
7. DAT = Days after either the 7DBP or the 3-5DAP application.
   Ratings at 3 days after the 7DBP and 3-5DAP applications were on 4-29-12 and 5-17-12, respectively.
   Ratings at 7 days after the 7DBP and 3-5DAP applications were on 5-3-12 and 5-21-12, respectively.
   Ratings at 14 days after the 7DBP and 3-5DAP applications were on 5-10-12 and 5-28-12, respectively.
   Ratings at 28 days after the 7DBP and 3-5DAP applications were on 5-24-12 and 6-11-12, respectively.
8. Not harvested.

Corn, Tilled Weed Control Studies

Southern Illinois University

General Corn Herbicide Comparison.

Trial ID: 12-24B
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-16-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Compare the efficacy of competitive corn herbicide programs.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 61-06 **Description:** RR2/LL
BBCH Scale: BCOR **Planting Date:** 5-16-12
Planting Method: SEEDED Seeded **Rate, Unit:** 28000 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** ABUTH - Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 2 Type: W **Code:** AMBTR - Ambrosia trifida L.
Common Name: ragweed, giant

Pest 3 Type: W **Code:** IPOHE - Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Pest 4 Type: W **Code:** SETFA - Setaria faberi Herrm.
Common Name: foxtail, giant

Pest 5 Type: W **Code:** CYPES - Cyperus esculentus L.
Common Name: nutsedge, yellow

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 27 FT
Plot Area, Unit: 270 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	NONE	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 150 LB/A, P2O5 0 LB/A, K2O 100 LB/A

Soil Description

% OM: 2 **Texture:** SIL SILT LOAM
pH: 6.9 **Soil Name:** BETHALTO
CEC: 12

Additional Measured Elements

Element	Quantity	Unit
P1	100	LB/A
K	378	LB/A

General Corn Herbicide Comparison.

Trial ID: 12-24B
Location: Belleville Res. Center
Investigator: Bryan Young

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-24-12					7	DAY	42.6	74.3	F
2.	4-29-12	3.06	IN	RAIN	rain					
3.	4-30-12	0.66	IN	RAIN	rain					
4.	5-1-12	0.13	IN	RAIN	rain					
5.	5-1-12					7	DAY	33.5	76	F
6.	5-4-12	0.25	IN	RAIN	rain					
7.	5-7-12	0.29	IN	RAIN	rain					
8.	5-8-12					7	DAY	47.5	87.8	F
9.	5-15-12					7	DAY	37.7	81.3	F
10.	5-21-12	0.18	IN	RAIN	rain					
11.	5-22-12					7	DAY	47.6	82.3	F
12.	5-29-12					7	DAY	48.1	90	F
13.	5-30-12	0.07	IN	RAIN	rain					
14.	5-31-12	0.21	IN	RAIN	rain					
15.	6-5-12					7	DAY	50.2	90.1	F
16.	6-11-12	0.75	IN	RAIN	rain					
17.	6-12-12					7	DAY	52.4	93.6	F
18.	6-17-12	0.36	IN	RAIN	rain					
19.	6-19-12					7	DAY	56.3	94	F
20.	6-26-12					7	DAY	51.8	105.4	F
21.	7-3-12					7	DAY	68.9	104.7	F
22.	7-8-12	0.28	IN	RAIN	rain					
23.	7-10-12					7	DAY	63.4	95	F
24.	7-17-12					7	DAY	61	102.2	F
25.	7-24-12					7	DAY	61	103	F
26.	7-29-12	0.15	IN	RAIN	rain					
27.	7-31-12					7	DAY	60.2	99.1	F
28.	8-5-12	0.18	IN	RAIN	rain					
29.	8-7-12					7	DAY	50.2	99.8	F
30.	8-13-12	0.88	IN	RAIN	rain					
31.	8-14-12					7	DAY	51	95.6	F
32.	8-17-12	1.19	IN	RAIN	rain					
33.	8-21-12					7	DAY	54.7	94.2	F
34.	8-26-12	0.04	IN	RAIN	rain					
35.	8-27-12	1.66	IN	RAIN	rain					
36.	8-31-12	0.11	IN	RAIN	rain					

Application Description

	A	B	C
Application Date:	5-17-12	6-5-12	6-5-12
Time of Day:	11:30	6:30	6:30
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	2-4"W-1	2-4"W-2
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	RJW	JRK	JRK
Air Temperature, Unit:	76 F	64 F	64 F
% Relative Humidity:	35	38	38
Wind Velocity, Unit:	4 MPH	0 MPH	0 MPH
Wind Direction:	W		
Dew Presence (Y/N):	N no		
Soil Temperature, Unit:	61 F	71 F	71 F
Soil Moisture:	BELNOR	BELNOR	BELNOR
% Cloud Cover:	10	0	0
Next Rain Occurred On:	5-21-12	6-11-12	6-11-12

Southern Illinois University

General Corn Herbicide Comparison.

Trial ID: 12-24B
Location: Belleville Res. Center
Investigator: Bryan Young

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	V5	V5
Stage Minimum, Percent:		V4	V4
Stage Maximum, Percent:		V5	V5
Height, Unit:		11 IN	11 IN
Height Minimum, Maximum:		9 11	9 11

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	ABUTH W DESC	ABUTH W DESC	ABUTH W DESC
Stage Majority, Percent:	NA	3	3
Stage Minimum, Percent:		Coty	Coty
Stage Maximum, Percent:		8	8
Height, Unit:		3 IN	3 IN
Height Minimum, Maximum:		1 6	1 6
Density, Unit:		0.01 FT2	0.01 FT2
Pest 2 Code, Type, Scale:	AMBTR W DESC	AMBTR W DESC	AMBTR W DESC
Stage Majority, Percent:	NA	4	4
Stage Minimum, Percent:		Coty	Coty
Stage Maximum, Percent:		8	8
Height, Unit:		3 IN	3 IN
Height Minimum, Maximum:		1 6	1 6
Density, Unit:		0.01 FT2	0.01 FT2
Pest 3 Code, Type, Scale:	IPOHE W DESC	IPOHE W DESC	IPOHE W DESC
Stage Majority, Percent:	NA	4	4
Stage Minimum, Percent:		Coty	Coty
Stage Maximum, Percent:		8	8
Height, Unit:		3 IN	3 IN
Height Minimum, Maximum:		1 5	1 5
Density, Unit:		0.3 FT2	0.3 FT2
Pest 4 Code, Type, Scale:	SETFA W DESC	SETFA W DESC	SETFA W DESC
Stage Majority, Percent:	NA	3	3
Stage Minimum, Percent:		1	1
Stage Maximum, Percent:		4	4
Height, Unit:		2 IN	2 IN
Height Minimum, Maximum:		0.5 4	0.5 4
Density, Unit:		0.1 FT2	0.1 FT2
Pest 5 Code, Type, Scale:	CYPES W DESC	CYPES W DESC	CYPES W DESC
Stage Majority, Percent:	NA	4	4
Stage Minimum, Percent:		3	3
Stage Maximum, Percent:		8	8
Height, Unit:		4 IN	4 IN
Height Minimum, Maximum:		2 7	2 7
Density, Unit:		0.5 FT2	0.5 FT2

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

General Corn Herbicide Comparison.

Trial ID: 12-24B
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 10-9-12 Moisture Percent	ZEAMD 10-9-12 Test wt. lb/bu	ZEAMD 10-9-12 Yield bu/A
	Pest Code											
	Crop Code											
	Rating Date											
	Rating Type											
	Rating Unit											
	Rating Timing											
	Trt-Eval Interval											
1	NONTREATED									17.3 a	56.8 a	83 e
2	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	18.6 a	56.3 a	118 cd
3	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	18.2 a	56.5 a	121 bcd
	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	2-4"W-2	C			
4	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	17.3 a	56.9 a	129 abc
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C			
	AATREX	4	SC	1	lb ai/a	1	qt/a	2-4"W-2	C			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C			
5	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B	18.1 a	56.6 a	138 abc
	AATREX	4	SC	1	lb ai/a	1	qt/a	2-4"W-1	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B			
6	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	17.3 a	56.9 a	132 abc
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C			
	PEAK	57	WG	0.0089	lb ai/a	0.25	oz/a	2-4"W-2	C			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C			
7	SOLIDA	25	WG	0.0156	lb ai/a	1	oz/a	2-4"W-1	B	18.5 a	56.3 a	138 abc
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-1	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B			
8	DEGREE XTRA	4.04	CS	2.02	lb ai/a	2	qt/a	PRE	A	18.1 a	56.5 a	121 bcd
	SOLIDA	25	WG	0.0156	lb ai/a	1	oz/a	2-4"W-2	C			
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-2	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C			
9	DEGREE XTRA	4.04	CS	2.02	lb ai/a	2	qt/a	PRE	A	18.4 a	56.4 a	134 abc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C			
10	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	17.6 a	56.7 a	104 de
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A			
11	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	A	18.3 a	56.5 a	133 abc
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C			
12	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	2-4"W-1	B	18.5 a	56.4 a	137 abc
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	2-4"W-1	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-1	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B			
13	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	17.7 a	56.8 a	104 de
	CINCH ATZ	5.5	SC	2.75	lb ai/a	2	qt/a	PRE	A			
14	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	A	17.6 a	56.8 a	125 a-d
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	2-4"W-2	C			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-2	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C			

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

General Corn Herbicide Comparison.

Trial ID: 12-24B
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 10-9-12 Moisture Percent	ZEAMD 10-9-12 Test wt. lb/bu	ZEAMD 10-9-12 Yield bu/A
15	VERDICT	5.57	EC	0.65	lb ai/a	15	fl oz/a	PRE	A	18.0 a	56.6 a	146 a
	GUARDSMAN MAX	5	SE	0.94	lb ai/a	1.5	pt/a	PRE	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C			
16	GUARDSMAN MAX	5	SE	2.5	lb ai/a	4	pt/a	2-4"W-1	B	17.8 a	56.6 a	134 abc
	ARMEZON	2.8	SL	0.0164	lb ai/a	0.75	oz/a	2-4"W-1	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-1	B			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-1	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B			
17	ANTHEM ATZ	4.5	SE	0.98	lb ai/a	28	fl oz/a	2-4"W-1	B	17.7 a	56.7 a	136 abc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-1	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B			
18	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	PRE	A	18.2 a	56.5 a	132 abc
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A			
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	2-4"W-2	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C			
19	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W-1	B	17.9 a	56.6 a	142 ab
	AATREX	4	SC	1	lb ai/a	1	qt/a	2-4"W-1	B			
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	2-4"W-1	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B			
20	DEGREE XTRA	4.04	CS	2.02	lb ai/a	2	qt/a	PRE	A	17.9 a	56.6 a	141 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C			
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-2	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C			
21	NONTREATED									16.9 a	56.6 a	56 f
22	NONTREATED									17.4 a	56.8 a	84 e
	LSD (P=.05)									0.99	0.49	21.8
	Standard Deviation									0.60	0.30	13.2
	CV									3.36	0.53	10.79
	Replicate F									7.762	4.747	0.377
	Replicate Prob(F)									0.0014	0.0138	0.6884
	Treatment F									1.751	0.961	8.918
	Treatment Prob(F)									0.0606	0.5246	0.0001

General Corn Herbicide Comparison.

Trial ID: 12-24B
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 6-5-12 Injury Percent 0 DA-B 0 DA-C	ZEAMD 6-6-12 Injury Percent 21 DAP	ZEAMD 6-12-12 Injury Percent 7 DA-B 7 DA-C	ZEAMD 6-19-12 Injury Percent 14 DA-B 14 DA-C	ZEAMD 6-26-12 Injury Percent 21 DA-B 21 DA-C	ZEAMD 7-17-12 Injury Percent 42 DA-B 42 DA-C
1	NONTREATED									0 a	0 a	0 d	0 c	0 a	0 a
2	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	0 a	0 a	0 d	0 c	0 a	0 a
3	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	0 a	0 a	0 d	0 c	0 a	0 a
	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	2-4"W-2	C						
4	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	0 a	0 a	0 d	0 c	0 a	0 a
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C						
	AATREX	4	SC	1	lb ai/a	1	qt/a	2-4"W-2	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
5	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B	0 a	0 a	0 d	0 c	0 a	0 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	2-4"W-1	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B						
6	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	0 a	0 a	1 d	0 c	0 a	0 a
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C						
	PEAK	57	WG	0.0089	lb ai/a	0.25	oz/a	2-4"W-2	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
7	SOLIDA	25	WG	0.0156	lb ai/a	1	oz/a	2-4"W-1	B	0 a	0 a	16 a	3 b	0 a	0 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B						
8	DEGREE XTRA	4.04	CS	2.02	lb ai/a	2	qt/a	PRE	A	0 a	0 a	15 a	4 b	0 a	0 a
	SOLIDA	25	WG	0.0156	lb ai/a	1	oz/a	2-4"W-2	C						
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
9	DEGREE XTRA	4.04	CS	2.02	lb ai/a	2	qt/a	PRE	A	0 a	0 a	0 d	0 c	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
10	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	0 a	0 a	0 d	0 c	0 a	0 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A						
11	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	A	0 a	0 a	0 d	0 c	0 a	0 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
12	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	2-4"W-1	B	0 a	0 a	9 b	3 b	0 a	0 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	2-4"W-1	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B						
13	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	0 d	0 c	0 a	0 a
	CINCH ATZ	5.5	SC	2.75	lb ai/a	2	qt/a	PRE	A						
14	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	A	0 a	0 a	5 c	0 c	0 a	0 a
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	2-4"W-2	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						

General Corn Herbicide Comparison.

Trial ID: 12-24B
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 6-5-12 Injury Percent 0 DA-B 0 DA-C	ZEAMD 6-6-12 Injury Percent 21 DAP	ZEAMD 6-12-12 Injury Percent 7 DA-B 7 DA-C	ZEAMD 6-19-12 Injury Percent 14 DA-B 14 DA-C	ZEAMD 6-26-12 Injury Percent 21 DA-B 21 DA-C	ZEAMD 7-17-12 Injury Percent 42 DA-B 42 DA-C
15	VERDICT	5.57	EC	0.65	lb ai/a	15	fl oz/a	PRE	A	0 a	0 a	0 d	0 c	0 a	0 a
	GUARDSMAN MAX	5	SE	0.94	lb ai/a	1.5	pt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
16	GUARDSMAN MAX	5	SE	2.5	lb ai/a	4	pt/a	2-4"W-1	B	0 a	0 a	16 a	9 a	0 a	0 a
	ARMEZON	2.8	SL	0.0164	lb ai/a	0.75	oz/a	2-4"W-1	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-1	B						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B						
17	ANTHEM ATZ	4.5	SE	0.98	lb ai/a	28	fl oz/a	2-4"W-1	B	0 a	0 a	0 d	0 c	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B						
18	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	PRE	A	0 a	0 a	0 d	0 c	0 a	0 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
19	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W-1	B	0 a	0 a	0 d	0 c	0 a	0 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	2-4"W-1	B						
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	2-4"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B						
20	DEGREE XTRA	4.04	CS	2.02	lb ai/a	2	qt/a	PRE	A	0 a	0 a	0 d	0 c	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C						
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C						
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
21	NONTREATED									0 a	0 a	0 d	0 c	0 a	0 a
22	NONTREATED									0 a	0 a	0 d	0 c	0 a	0 a
	LSD (P=.05)									0.0	0.0	1.2	1.9	0.0	0.0
	Standard Deviation									0.0	0.0	0.7	1.1	0.0	0.0
	CV									0.0	0.0	25.72	136.56	0.0	0.0
	Replicate F									0.000	0.000	3.115	1.135	0.000	0.000
	Replicate Prob(F)									1.0000	1.0000	0.0548	0.3311	1.0000	1.0000
	Treatment F									0.000	0.000	180.819	10.583	0.000	0.000
	Treatment Prob(F)									1.0000	1.0000	0.0001	0.0001	1.0000	1.0000

General Corn Herbicide Comparison.

Trial ID: 12-24B
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ABUTH 6-5-12 Control Percent 0 DA-B 0 DA-C	ABUTH 6-26-12 Control Percent 21 DA-B 21 DA-C	ABUTH 7-17-12 Control Percent 42 DA-B 42 DA-C	AMBTR 6-5-12 Control Percent 0 DA-B 0 DA-C	AMBTR 6-26-12 Control Percent 21 DA-B 21 DA-C	AMBTR 7-17-12 Control Percent 42 DA-B 42 DA-C
1	NONTREATED									0 e	0 e	0 f	0 a	0 d	0 d
2	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	75 a	50 d	50 c	37 a	40 c	33 c
3	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	37 bc	99 a	99 a	27 a	99 a	99 a
	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	2-4"W-2	C						
4	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	37 bc	99 a	99 a	23 a	99 a	99 a
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C						
	AATREX	4	SC	1	lb ai/a	1	qt/a	2-4"W-2	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
5	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B		99 a	99 a		99 a	99 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	2-4"W-1	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B						
6	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	50 abc	99 a	99 a	7 a	98 a	98 a
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C						
	PEAK	57	WG	0.0089	lb ai/a	0.25	oz/a	2-4"W-2	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
7	SOLIDA	25	WG	0.0156	lb ai/a	1	oz/a	2-4"W-1	B		98 ab	95 b		99 a	99 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B						
8	DEGREE XTRA	4.04	CS	2.02	lb ai/a	2	qt/a	PRE	A	35 bcd	98 ab	99 a	15 a	98 a	98 a
	SOLIDA	25	WG	0.0156	lb ai/a	1	oz/a	2-4"W-2	C						
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
9	DEGREE XTRA	4.04	CS	2.02	lb ai/a	2	qt/a	PRE	A	20 cde	98 ab	98 a	0 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
10	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	63 ab	58 c	45 d	18 a	50 b	50 b
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A						
11	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	A	57 ab	98 ab	98 a	35 a	98 a	99 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
12	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	2-4"W-1	B		99 a	99 a		99 a	99 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	2-4"W-1	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B						
13	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	65 ab	50 d	40 e	23 a	37 c	27 c
	CINCH ATZ	5.5	SC	2.75	lb ai/a	2	qt/a	PRE	A						
14	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	A	2 de	99 a	99 a	7 a	99 a	99 a
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	2-4"W-2	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						

General Corn Herbicide Comparison.

Trial ID: 12-24B
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ABUTH 6-5-12 Control Percent 0 DA-B 0 DA-C	ABUTH 6-26-12 Control Percent 21 DA-B 21 DA-C	ABUTH 7-17-12 Control Percent 42 DA-B 42 DA-C	AMBTR 6-5-12 Control Percent 0 DA-B 0 DA-C	AMBTR 6-26-12 Control Percent 21 DA-B 21 DA-C	AMBTR 7-17-12 Control Percent 42 DA-B 42 DA-C
15	VERDICT	5.57	EC	0.65	lb ai/a	15	fl oz/a	PRE	A	37 bc	97 b	98 ab	7 a	97 a	98 a
	GUARDSMAN MAX	5	SE	0.94	lb ai/a	1.5	pt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
16	GUARDSMAN MAX	5	SE	2.5	lb ai/a	4	pt/a	2-4"W-1	B		99 a	99 a		99 a	99 a
	ARMEZON	2.8	SL	0.0164	lb ai/a	0.75	oz/a	2-4"W-1	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-1	B						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B						
17	ANTHEM ATZ	4.5	SE	0.98	lb ai/a	28	fl oz/a	2-4"W-1	B		98 ab	98 a		99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B						
18	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	PRE	A	0 e	98 ab	99 a	33 a	98 a	98 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
19	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W-1	B		98 ab	99 a		99 a	99 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	2-4"W-1	B						
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	2-4"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B						
20	DEGREE XTRA	4.04	CS	2.02	lb ai/a	2	qt/a	PRE	A	40 bc	98 ab	98 a	13 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C						
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C						
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
21	NONTREATED									0 e	0 e	0 f	0 a	0 d	0 d
22	NONTREATED									0 e	0 e	0 f	0 a	0 d	0 d
	LSD (P=.05)									34.3	1.7	2.8	27.2	9.2	9.2
	Standard Deviation									20.5	1.1	1.7	16.3	5.6	5.6
	CV									63.5	1.34	2.19	106.34	7.21	7.25
	Replicate F									0.237	0.380	0.036	3.542	0.510	0.658
	Replicate Prob(F)									0.7904	0.6868	0.9643	0.0420	0.6042	0.5230
	Treatment F									4.821	3475.706	1388.711	1.962	132.776	140.687
	Treatment Prob(F)									0.0002	0.0001	0.0001	0.0582	0.0001	0.0001

General Corn Herbicide Comparison.

Trial ID: 12-24B
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	IPOHE 6-5-12 Control Percent 0 DA-B 0 DA-C	IPOHE 6-26-12 Control Percent 21 DA-B 21 DA-C	IPOHE 7-17-12 Control Percent 42 DA-B 42 DA-C	SETFA 6-5-12 Control Percent 0 DA-B 0 DA-C	SETFA 6-26-12 Control Percent 21 DA-B 21 DA-C	SETFA 7-17-12 Control Percent 42 DA-B 42 DA-C
1	NONTREATED									0 a	0 j	0 g	0 e	0 f	0 f
2	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	17 a	28 hi	25 ef	33 bcd	33 d	30 d
3	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	23 a	87 abc	83 abc	27 cde	68 b	62 b
	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	2-4"W-2	C						
4	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	5 a	94 a	95 a	30 b-e	98 a	98 a
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C						
	AATREX	4	SC	1	lb ai/a	1	qt/a	2-4"W-2	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
5	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B		80 cde	80 c		99 a	99 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	2-4"W-1	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B						
6	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	7 a	82 cde	88 abc	20 cde	98 a	98 a
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C						
	PEAK	57	WG	0.0089	lb ai/a	0.25	oz/a	2-4"W-2	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
7	SOLIDA	25	WG	0.0156	lb ai/a	1	oz/a	2-4"W-1	B		63 g	53 d		96 a	95 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B						
8	DEGREE XTRA	4.04	CS	2.02	lb ai/a	2	qt/a	PRE	A	7 a	73 ef	62 d	13 de	96 a	97 a
	SOLIDA	25	WG	0.0156	lb ai/a	1	oz/a	2-4"W-2	C						
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
9	DEGREE XTRA	4.04	CS	2.02	lb ai/a	2	qt/a	PRE	A	13 a	67 fg	62 d	27 cde	98 a	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
10	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	37 a	37 h	33 e	27 cde	25 e	17 e
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A						
11	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	A	17 a	84 bcd	82 bc	32 b-e	98 a	98 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
12	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	2-4"W-1	B		85 bc	90 abc		98 a	98 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	2-4"W-1	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B						
13	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	17 a	22 i	15 f	87 a	53 c	43 c
	CINCH ATZ	5.5	SC	2.75	lb ai/a	2	qt/a	PRE	A						
14	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	A	0 a	83 bcd	85 abc	60 ab	97 a	96 a
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	2-4"W-2	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						

General Corn Herbicide Comparison.

Trial ID: 12-24B
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	IPOHE 6-5-12 Control Percent 0 DA-B 0 DA-C	IPOHE 6-26-12 Control Percent 21 DA-B 21 DA-C	IPOHE 7-17-12 Control Percent 42 DA-B 42 DA-C	SETFA 6-5-12 Control Percent 0 DA-B 0 DA-C	SETFA 6-26-12 Control Percent 21 DA-B 21 DA-C	SETFA 7-17-12 Control Percent 42 DA-B 42 DA-C
15	VERDICT	5.57	EC	0.65	lb ai/a	15	fl oz/a	PRE	A	10 a	85 bc	87 abc	62 ab	97 a	96 a
	GUARDSMAN MAX	5	SE	0.94	lb ai/a	1.5	pt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
16	GUARDSMAN MAX	5	SE	2.5	lb ai/a	4	pt/a	2-4"W-1	B		91 ab	93 ab		97 a	97 a
	ARMEZON	2.8	SL	0.0164	lb ai/a	0.75	oz/a	2-4"W-1	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-1	B						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B						
17	ANTHEM ATZ	4.5	SE	0.98	lb ai/a	28	fl oz/a	2-4"W-1	B		75 def	78 c		96 a	97 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B						
18	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	PRE	A	0 a	82 cde	83 abc	43 bcd	98 a	98 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
19	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W-1	B		78 cde	80 c		95 a	95 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	2-4"W-1	B						
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	2-4"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B						
20	DEGREE XTRA	4.04	CS	2.02	lb ai/a	2	qt/a	PRE	A	20 a	82 cde	81 bc	47 bc	96 a	96 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C						
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C						
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C						
21	NONTREATED									0 a	0 j	0 g	0 e	0 f	0 f
22	NONTREATED									0 a	0 j	0 g	0 e	0 f	0 f
	LSD (P=.05)									22.2	9.3	12.0	31.8	7.4	11.8
	Standard Deviation									13.3	5.6	7.3	19.1	4.5	7.1
	CV									124.33	9.01	11.81	60.32	6.0	9.78
	Replicate F									0.969	2.307	3.888	4.823	1.054	1.286
	Replicate Prob(F)									0.3911	0.1121	0.0282	0.0153	0.3575	0.2871
	Treatment F									1.879	96.386	62.702	4.741	207.572	86.026
	Treatment Prob(F)									0.0690	0.0001	0.0001	0.0001	0.0001	0.0001

General Corn Herbicide Comparison.

Trial ID: 12-24B
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	CYPES	CYPES	CYPES
	Pest Code									CYPES	CYPES	CYPES
	Crop Code											
	Rating Date									6-5-12	6-26-12	7-17-12
	Rating Type									Control	Control	Control
	Rating Unit									Percent	Percent	Percent
	Rating Timing									0 DA-B	21 DA-B	42 DA-B
	Trt-Eval Interval									0 DA-C	21 DA-C	42 DA-C
1	NONTREATED									0 e	0 e	0 d
2	LEXAR EZ	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	50 a	35 d	30 c
3	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	42 abc	89 b	90 a
	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	2-4"W-2	C			
4	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	27 a-e	98 a	97 a
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C			
	AATREX	4	SC	1	lb ai/a	1	qt/a	2-4"W-2	C			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C			
5	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B		96 a	95 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	2-4"W-1	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B			
6	LEXAR EZ	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	42 abc	98 a	97 a
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C			
	PEAK	57	WG	0.0089	lb ai/a	0.25	oz/a	2-4"W-2	C			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C			
7	SOLIDA	25	WG	0.0156	lb ai/a	1	oz/a	2-4"W-1	B		97 a	98 a
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-1	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B			
8	DEGREE XTRA	4.04	CS	2.02	lb ai/a	2	qt/a	PRE	A	30 a-d	95 ab	95 a
	SOLIDA	25	WG	0.0156	lb ai/a	1	oz/a	2-4"W-2	C			
	GLYFOS X-TRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-2	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C			
9	DEGREE XTRA	4.04	CS	2.02	lb ai/a	2	qt/a	PRE	A	43 abc	96 a	95 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C			
10	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	27 a-e	53 c	47 b
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A			
11	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	A	18 cde	94 ab	92 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C			
12	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	2-4"W-1	B		94 ab	94 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	2-4"W-1	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-1	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B			
13	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	53 a	30 d	27 c
	CINCH ATZ	5.5	SC	2.75	lb ai/a	2	qt/a	PRE	A			
14	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	A	47 ab	93 ab	95 a
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	2-4"W-2	C			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	2-4"W-2	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C			

General Corn Herbicide Comparison.

Trial ID: 12-24B
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	CYPES	CYPES	CYPES
	Pest Code									CYPES	CYPES	CYPES
	Crop Code											
	Rating Date									6-5-12	6-26-12	7-17-12
	Rating Type									Control	Control	Control
	Rating Unit									Percent	Percent	Percent
	Rating Timing									0 DA-B	21 DA-B	42 DA-B
	Trt-Eval Interval									0 DA-C	21 DA-C	42 DA-C
15	VERDICT	5.57	EC	0.65	lb ai/a	15	fl oz/a	PRE	A	20 b-e	94 ab	93 a
	GUARDSMAN MAX	5	SE	0.94	lb ai/a	1.5	pt/a	PRE	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C			
16	GUARDSMAN MAX	5	SE	2.5	lb ai/a	4	pt/a	2-4"W-1	B		97 a	95 a
	ARMEZON	2.8	SL	0.0164	lb ai/a	0.75	oz/a	2-4"W-1	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-1	B			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-1	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B			
17	ANTHEM ATZ	4.5	SE	0.98	lb ai/a	28	fl oz/a	2-4"W-1	B		95 ab	95 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-1	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B			
18	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	PRE	A	13 de	96 ab	94 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A			
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	2-4"W-2	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C			
19	SURESTART	4.25	SE	1.06	lb ai/a	2	pt/a	2-4"W-1	B		95 ab	95 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	2-4"W-1	B			
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	2-4"W-1	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-1	B			
20	DEGREE XTRA	4.04	CS	2.02	lb ai/a	2	qt/a	PRE	A	10 de	96 ab	92 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C			
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-2	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"W-2	C			
21	NONTREATED									0 e	0 e	0 d
22	NONTREATED									0 e	0 e	0 d
	LSD (P=.05)									27.2	6.6	8.1
	Standard Deviation									16.3	4.0	4.9
	CV									61.67	5.37	6.65
	Replicate F									5.024	1.727	7.442
	Replicate Prob(F)									0.0137	0.1901	0.0017
	Treatment F									3.858	245.424	168.296
	Treatment Prob(F)									0.0010	0.0001	0.0001

Southern Illinois University

General Corn Herbicide Comparison.

Trial ID: 12-24B
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Syngenta, Cheminova (HZEAMXRIM1201), Bayer, DuPont, BASF, AMVAC, Dow, FMC, and Monsanto.
2. Ratings: CI at 7 and 14 DA-B and DA-C; CI/WC at 21 DAP and at 0, 21, and 42 DA-C.
3. Yield.
4. Rainfall following the PRE application was 0.18 inch 4 days later and 0.28 inch 14 days later.
5. Harvested 10-9-12, (2) 30 inch rows by 24 ft.

DuPont Crop Protection Demonstration in Corn.

Trial ID: 12-5B
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-29-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Demonstrate the performance of DuPont crop protection products in corn.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: P1395HR **Description:** LL/RR2
BBCH Scale: BCOR **Planting Date:** 5-29-12
Planting Method: SEEDED Seeded **Rate, Unit:** 28000 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** NA
Common Name: yield only

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 80 FT
Plot Area, Unit: 800 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 1 **Study Design:** NONRAN Non-Randomized

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 150 LB/A, P2O5 0 LB/A, K2O 150 LB/A

Soil Description

% OM: 1.9 **Texture:** SIL SILT LOAM
pH: 6.8 **Soil Name:** WINFIELD
CEC: 7

Additional Measured Elements

Element	Quantity	Unit
P1	119	LB/A
K	315	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

DuPont Crop Protection Demonstration in Corn.

Trial ID: 12-5B
Location: Belleville Res. Center
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-24-12					7	DAY	42.6	74.3	F
2.	4-29-12	3.06	IN	RAIN	rain					
3.	4-30-12	0.66	IN	RAIN	rain					
4.	5-1-12	0.13	IN	RAIN	rain					
5.	5-1-12					7	DAY	33.5	76	F
6.	5-4-12	0.25	IN	RAIN	rain					
7.	5-7-12	0.29	IN	RAIN	rain					
8.	5-8-12					7	DAY	47.5	87.8	F
9.	5-15-12					7	DAY	37.7	81.3	F
10.	5-21-12	0.18	IN	RAIN	rain					
11.	5-22-12					7	DAY	47.6	82.3	F
12.	5-29-12					7	DAY	48.1	90	F
13.	5-30-12	0.07	IN	RAIN	rain					
14.	5-31-12	0.21	IN	RAIN	rain					
15.	6-5-12					7	DAY	50.2	90.1	F
16.	6-11-12	0.75	IN	RAIN	rain					
17.	6-12-12					7	DAY	52.4	93.6	F
18.	6-17-12	0.36	IN	RAIN	rain					
19.	6-19-12					7	DAY	56.3	94	F
20.	6-26-12					7	DAY	51.8	105.4	F
21.	7-3-12					7	DAY	68.9	104.7	F
22.	7-8-12	0.28	IN	RAIN	rain					
23.	7-10-12					7	DAY	63.4	95	F
24.	7-17-12					7	DAY	61	102.2	F
25.	7-24-12					7	DAY	61	103	F
26.	7-29-12	0.15	IN	RAIN	rain					
27.	7-31-12					7	DAY	60.2	99.1	F
28.	8-5-12	0.18	IN	RAIN	rain					
29.	8-7-12					7	DAY	50.2	99.8	F
30.	8-13-12	0.88	IN	RAIN	rain					
31.	8-14-12					7	DAY	51	95.6	F
32.	8-17-12	1.19	IN	RAIN	rain					
33.	8-21-12					7	DAY	54.7	94.2	F
34.	8-26-12	0.04	IN	RAIN	rain					
35.	8-27-12	1.66	IN	RAIN	rain					
36.	8-31-12	0.11	IN	RAIN	rain					

Application Description

	A	B	C	D
Application Date:	5-30-12	6-8-12	6-18-12	7-30-12
Time of Day:	7:00	10:30	6:30	7:00
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	PRE	V2	V4	VT
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	JRK	JRK	RJW	RJW
Air Temperature, Unit:	62 F	83 F	77 F	76 F
% Relative Humidity:	87	31	71	79
Wind Velocity, Unit:	0 MPH	1 MPH	6 MPH	4 MPH
Wind Direction:		W	S	W
Dew Presence (Y/N):	N no	N no	Y yes	Y yes
Soil Temperature, Unit:	71 F	72 F	78 F	80 F
Soil Moisture:	BELNOR	BELNOR	NORMAL	BELNOR
% Cloud Cover:	100	20	10	50
Next Rain Occurred On:	5-31-12	6-11-12	7-7-12	8-4-12

DuPont Crop Protection Demonstration in Corn.

Trial ID: 12-5B
Location: Belleville Res. Center
Investigator: Bryan Young

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR
Stage Scale Used:	DESC	DESC	DESC	DESC
Stage Majority, Percent:	NA	V2	V4	VT
Stage Minimum, Percent:		V1	V3	VT
Stage Maximum, Percent:		V2	V4	VT
Height, Unit:		3 IN	8 IN	60 IN
Height Minimum, Maximum:		1.5 3	6 8	48 60

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	NA W DESC	NA W DESC	NA W DESC	NA W DESC
Stage Majority, Percent:	NA	NA	NA	NA

Application Equipment

	A	B	C	D
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR	XR
Nozzle Size:	8002	8002	8002	8002
Boom Length, Unit:	10 FT	10 FT	10 FT	10 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA

DuPont Crop Protection Demonstration in Corn.

Trial ID: 12-5B
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 11-8-12 Moisture Percent	ZEAMD 11-8-12 Test wt. lb/bu	ZEAMD 11-8-12 Yield bu/A
1	NONTREATED									22.4	55.3	54
2	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	A	22.7	55.2	64
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	V4	C			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	V4	C			
	N-PAK AMS	3.4	SL	3.92	% v/v	2	lb ai/a	V4	C			
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	VT	D			
	ASANA	0.66	EC	0.031	lb ai/a	6	fl oz/a	VT	D			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	VT	D			
3	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	23.3	54.9	51
	CINCH ATZ	5.5	SC	1.37	lb ai/a	1	qt/a	PRE	A			
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	VT	D			
	ASANA	0.66	EC	0.031	lb ai/a	6	fl oz/a	VT	D			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	VT	D			
4	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	22.8	55.2	70
	CINCH ATZ	5.5	SC	2.75	lb ai/a	2	qt/a	PRE	A			
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	VT	D			
	ASANA	0.66	EC	0.031	lb ai/a	6	fl oz/a	VT	D			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	VT	D			
5	PREQUEL	45	WG	0.07	lb ai/a	2.5	oz/a	PRE	A	22.8	55.1	78
	AATREX	4	SC	2	lb ai/a	2	qt/a	PRE	A			
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	VT	D			
	ASANA	0.66	EC	0.031	lb ai/a	6	fl oz/a	VT	D			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	VT	D			
6	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	V2	B	23.5	54.9	66
	BREAKFREE	6.4	EC	1.06	lb ai/a	1.33	pt/a	V2	B			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	V2	B			
	N-PAK AMS	3.4	SL	3.92	% v/v	2	lb ai/a	V2	B			
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	VT	D			
	ASANA	0.66	EC	0.031	lb ai/a	6	fl oz/a	VT	D			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	VT	D			
7	CINCH ATZ	5.5	SC	1.37	lb ai/a	1	qt/a	PRE	A	22.2	55.3	85
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	V4	C			
	AATREX	4	SC	1	lb ai/a	1	qt/a	V4	C			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	V4	C			
	N-PAK AMS	3.4	SL	3.92	% v/v	2	lb ai/a	V4	C			
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	VT	D			
	ASANA	0.66	EC	0.031	lb ai/a	6	fl oz/a	VT	D			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	VT	D			
8	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	V2	B	22.3	55.2	81
	BREAKFREE ATZ	5.25	SC	1.97	lb ai/a	1.5	qt/a	V2	B			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	V2	B			
	N-PAK AMS	3.4	SL	3.92	% v/v	2	lb ai/a	V2	B			
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	VT	D			
	ASANA	0.66	EC	0.031	lb ai/a	6	fl oz/a	VT	D			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	VT	D			
9	BREAKFREE ATZ	5.25	SC	1.97	lb ai/a	3	pt/a	PRE	A	21.9	55.5	88
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	V4	C			
	AATREX	4	SC	1	lb ai/a	1	qt/a	V4	C			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	V4	C			
	N-PAK AMS	3.4	SL	3.92	% v/v	2	lb ai/a	V4	C			
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	VT	D			
	ASANA	0.66	EC	0.031	lb ai/a	6	fl oz/a	VT	D			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	VT	D			

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

DuPont Crop Protection Demonstration in Corn.

Trial ID: 12-5B
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 11-8-12 Moisture Percent	ZEAMD 11-8-12 Test wt. lb/bu	ZEAMD 11-8-12 Yield bu/A
10	CORVUS	2.62	SC	0.102	lb ai/a	5	fl oz/a	PRE	A	22.1	55.3	74
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	V4	C			
	N-PAK AMS	3.4	SL	3.92	% v/v	2	lb ai/a	V4	C			
	HEADLINE AMP	1.68	SC	0.131	lb ai/a	10	fl oz/a	VT	D			
	ASANA	0.66	EC	0.031	lb ai/a	6	fl oz/a	VT	D			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	VT	D			
11	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	A	22.2	55.3	67
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A			
	VERDICT	5.57	EC	0.566	lb ai/a	13	fl oz/a	PRE	A			
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	VT	D			
	ASANA	0.66	EC	0.031	lb ai/a	6	fl oz/a	VT	D			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	VT	D			
12	NONTREATED									20.5	55.3	15
	LSD (P=.05)									.	.	.
	Standard Deviation									.	.	.
	CV									.	.	.

Southern Illinois University

DuPont Crop Protection Demonstration in Corn.

Trial ID: 12-5B
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: DuPont (USA-12-297; MWJ-12-097).
2. Ratings: None, maybe take photos at 42 DAP or just prior to canopy closure.
3. Yield.
4. Rainfall following the PRE application was 0.28 inch 1 day later, and 0.75 inch 12 days later.
5. Harvested 11-8-12, (2) 30 inch rows by 77 ft.

Southern Illinois University

Syngenta ICS Corn Trial.

Trial ID: 12-1-W220
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-18-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate Syngenta programs in corn
for yield.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: See treatment list
BBCH Scale: BCOR **Planting Date:** 5-18-12
Planting Method: SEEDED Seeded **Rate, Unit:** 30000 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** PANDI - Panicum dichotomiflorum Michx.
Common Name: panicum, fall

Pest 2 Type: W **Code:** AMBTR - Ambrosia trifida L.
Common Name: ragweed, giant

Pest 3 Type: W **Code:** ABUTH - Abutilon theophrasti Medik.
Common Name: velvetleaf

Site and Design

Plot Width, Unit: 15 FT **Site Type:** FIELD field
Plot Length, Unit: 125 FT
Plot Area, Unit: 1875 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 1 **Study Design:** NONRAN Non-Randomized

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 190 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 1.5 **Texture:** SIL SILT LOAM
pH: 6.4 **Soil Name:** WINFIELD
CEC: 6

Additional Measured Elements

Element	Quantity	Unit
P1	72	LB/A
K	313	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Syngenta ICS Corn Trial.

Trial ID: 12-1-W220
Location: Belleville Res. Center
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-24-12					7	DAY	42.6	74.3	F
2.	4-29-12	3.06	IN	RAIN	rain					
3.	4-30-12	0.66	IN	RAIN	rain					
4.	5-1-12	0.13	IN	RAIN	rain					
5.	5-1-12					7	DAY	33.5	76	F
6.	5-4-12	0.25	IN	RAIN	rain					
7.	5-7-12	0.29	IN	RAIN	rain					
8.	5-8-12					7	DAY	47.5	87.8	F
9.	5-15-12					7	DAY	37.7	81.3	F
10.	5-21-12	0.18	IN	RAIN	rain					
11.	5-22-12					7	DAY	47.6	82.3	F
12.	5-29-12					7	DAY	48.1	90	F
13.	5-30-12	0.07	IN	RAIN	rain					
14.	5-31-12	0.21	IN	RAIN	rain					
15.	6-5-12					7	DAY	50.2	90.1	F
16.	6-11-12	0.75	IN	RAIN	rain					
17.	6-12-12					7	DAY	52.4	93.6	F
18.	6-17-12	0.36	IN	RAIN	rain					
19.	6-19-12					7	DAY	56.3	94	F
20.	6-26-12					7	DAY	51.8	105.4	F
21.	7-3-12					7	DAY	68.9	104.7	F
22.	7-8-12	0.28	IN	RAIN	rain					
23.	7-10-12					7	DAY	63.4	95	F
24.	7-17-12					7	DAY	61	102.2	F
25.	7-24-12					7	DAY	61	103	F
26.	7-29-12	0.15	IN	RAIN	rain					
27.	7-31-12					7	DAY	60.2	99.1	F
28.	8-5-12	0.18	IN	RAIN	rain					
29.	8-7-12					7	DAY	50.2	99.8	F
30.	8-13-12	0.88	IN	RAIN	rain					
31.	8-14-12					7	DAY	51	95.6	F
32.	8-17-12	1.19	IN	RAIN	rain					
33.	8-21-12					7	DAY	54.7	94.2	F
34.	8-26-12	0.04	IN	RAIN	rain					
35.	8-27-12	1.66	IN	RAIN	rain					
36.	8-31-12	0.11	IN	RAIN	rain					

Application Description

	A	B	C	D	E
Application Date:	5-19-12	6-5-12	6-5-12	6-11-12	6-20-12
Time of Day:	12:15	6:30	6:30	9:15	17:30
Application Method:	Spray	Spray	Spray	Spray	Spray
Application Timing:	PRE	2-4"W-1	2-4"W-2	V5	R1
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	RJW/LAH	LAH	LAH	LAH	JRK
Air Temperature, Unit:	88 F	64 F	64 F	79 F	90 F
% Relative Humidity:	40	68	68	79	41
Wind Velocity, Unit:	6 MPH	2 MPH	2 MPH	6 MPH	6 MPH
Wind Direction:	N	N	N	S	N
Dew Presence (Y/N):	N no	N no	N no	N no	N no
Soil Temperature, Unit:	63 F	71 F	71 F	73 F	77 F
Soil Moisture:	BELNOR	BELNOR	BELNOR	BELNOR	BELNOR
% Cloud Cover:	10	0	0	80	80
Next Rain Occurred On:	5-21-12	6-11-12	6-11-12	6-11-12	7-8-12

Syngenta ICS Corn Trial.

Trial ID: 12-1-W220
Location: Belleville Res. Center
Investigator: Bryan Young

Crop Stage At Each Application

	A	B	C	D	E
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR
Stage Scale Used:	DESC	DESC	DESC	DESC	DESC
Stage Majority, Percent:	NA	V4	V4	V5	R1
Stage Minimum, Percent:		V3	V3	V5	VT
Stage Maximum, Percent:		V4	V4	V5	R1
Height, Unit:		10 IN	10 IN	18 IN	78 IN
Height Minimum, Maximum:		8 10	8 10	15 18	62 78

Pest Stage At Each Application

	A	B	C	D	E
Pest 1 Code, Type, Scale:	PANDI W DESC	PANDI W DESC	PANDI W DESC	PANDI W DESC	PANDI W DESC
Stage Majority, Percent:	NA	3	3	NA	NA
Stage Minimum, Percent:		2	2		
Stage Maximum, Percent:		3	3		
Height, Unit:		3 IN	3 IN		
Height Minimum, Maximum:		1 4	1 4		
Density, Unit:		3 FT2	3 FT2		
Pest 2 Code, Type, Scale:	AMBTR W DESC	AMBTR W DESC	AMBTR W DESC	AMBTR W DESC	AMBTR W DESC
Stage Majority, Percent:	NA	4	4	NA	NA
Stage Minimum, Percent:		2	2		
Stage Maximum, Percent:		4	4		
Height, Unit:		3 IN	3 IN		
Height Minimum, Maximum:		1 4	1 4		
Density, Unit:		0.5 FT2	0.5 FT2		
Pest 3 Code, Type, Scale:	ABUTH W DESC	ABUTH W DESC	ABUTH W DESC	ABUTH W DESC	ABUTH W DESC
Stage Majority, Percent:	NA	4	4	NA	NA
Stage Minimum, Percent:		2	2		
Stage Maximum, Percent:		5	5		
Height, Unit:		2 IN	2 IN		
Height Minimum, Maximum:		1 2	1 2		
Density, Unit:		0.5 FT2	0.5 FT2		

Application Equipment

	A	B	C	D	E
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR	XR	XR
Nozzle Size:	8003	8003	8003	8003	8003
Boom Length, Unit:	10 FT	10 FT	10 FT	10 FT	10 FT
Spray Volume, Unit:	18 GPA	18 GPA	18 GPA	18 GPA	18 GPA

Syngenta ICS Corn Trial.

Trial ID: 12-1-W220
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 10-16-12 Moisture Percent	ZEAMD 10-16-12 Test wt. lb/bu	ZEAMD 10-16-12 Yield bu/A	PANDI 6-11-12 Control Percent V5 6 DA-C	PANDI 7-18-12 Control Percent R1 43 DA-C
1	NK 68B Agrisure 3000 GT w/Cruiser									21.5	55.0	72	97	97
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
2	NK 68B Agrisure 3000 GT w/Cruiser									21.0	55.2	50	97	98
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
3	NK 68B Agrisure 3000 GT w/Cruiser									20.8	55.0	48	99	99
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A					
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
4	NK 68B Agrisure Viptera 3111 w/Cruiser									21.7	54.7	40	97	97
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
5	NK 68B Agrisure Viptera 3111 w/Cruiser									23.3	54.2	36	97	98
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
6	NK 68B Agrisure Viptera 3111 w/Cruiser									24.4	53.9	35	99	99
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A					
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
7	NK 68B Agrisure 3000 GT w/Cruiser									21.3	54.9	34	99	97
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
8	NK 68B Agrisure 3000 GT w/Cruiser									18.9	55.6	31	99	98
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Syngenta ICS Corn Trial.

Trial ID: 12-1-W220
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 10-16-12 Moisture Percent	ZEAMD 10-16-12 Test wt. lb/bu	ZEAMD 10-16-12 Yield bu/A	PANDI 6-11-12 Control Percent V5 6 DA-C	PANDI 7-18-12 Control Percent R1 43 DA-C
9	NK 68B Agrisure 3000 GT w/Cruiser									19.7	55.4	29	99	99
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A					
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
10	NK 68B Agrisure Viptera 3111 w/Cruiser									22.8	54.5	43	97	97
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
11	NK 68B Agrisure Viptera 3111 w/Cruiser									22.3	54.6	52	97	98
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					
12	NK 68B Agrisure Viptera 3111 w/Cruiser									23.9	54.1	48	98	99
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A					
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
13	NK 68B Agrisure 3000 GT w/Cruiser									20.7	55.2	69	97	97
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					
14	NK 68B Agrisure 3000 GT w/Cruiser									21.3	55.1	50	97	99
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					
15	NK 68B Agrisure 3000 GT w/Cruiser									20.4	55.3	68	99	99
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A					
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					
16	NK 68B Agrisure Viptera 3111 w/Cruiser									22.2	54.7	75	95	96
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					
17	NK 68B Agrisure Viptera 3111 w/Cruiser									22.2	54.8	97	97	98
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					

Syngenta ICS Corn Trial.

Trial ID: 12-1-W220
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 10-16-12 Moisture Percent	ZEAMD 10-16-12 Test wt. lb/bu	ZEAMD 10-16-12 Yield bu/A	PANDI 6-11-12 Control Percent V5 6 DA-C	PANDI 7-18-12 Control Percent R1 43 DA-C
18	NK 68B Agrisure Viptera 3111 w/Cruiser									22.7	54.6	72	99	99
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A					
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					
19	NK 68B Agrisure 3000 GT w/Cruiser									21.2	54.8	60	97	97
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
20	NK 68B Agrisure 3000 GT w/Cruiser									20.9	55.1	49	98	98
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
21	NK 68B Agrisure 3000 GT w/Cruiser									19.6	55.5	43	98	98
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A					
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
22	NK 68B Agrisure Viptera 3111 w/Cruiser									23.4	54.3	53	97	97
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
23	NK 68B Agrisure Viptera 3111 w/Cruiser									23.1	54.5	69	99	99
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
24	NK 68B Agrisure Viptera 3111 w/Cruiser									22.4	54.7	56	99	99
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A					
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
	LSD (P=.05)									.	.	.	.	.
	Standard Deviation									.	.	.	.	.
	CV									.	.	.	.	.

Syngenta ICS Corn Trial.

Trial ID: 12-1-W220
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 6-11-12 Control Percent V5 6 DA-C	AMBTR 7-18-12 Control Percent R1 43 DA-C	ABUTH 6-11-12 Control Percent V5 6 DA-C	ABUTH 7-18-12 Control Percent R1 43 DA-C
1	NK 68B Agrisure 3000 GT w/Cruiser									97	97	97	97
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A				
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E				
2	NK 68B Agrisure 3000 GT w/Cruiser									97	99	99	99
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E				
3	NK 68B Agrisure 3000 GT w/Cruiser									99	99	99	99
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A				
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E				
4	NK 68B Agrisure Viptera 3111 w/Cruiser									95	97	97	97
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A				
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E				
5	NK 68B Agrisure Viptera 3111 w/Cruiser									99	99	99	99
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E				
6	NK 68B Agrisure Viptera 3111 w/Cruiser									97	99	99	99
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A				
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E				
7	NK 68B Agrisure 3000 GT w/Cruiser									95	97	95	94
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A				
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
8	NK 68B Agrisure 3000 GT w/Cruiser									98	97	99	98
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B				

Syngenta ICS Corn Trial.

Trial ID: 12-1-W220
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 6-11-12 Control Percent V5 6 DA-C	AMBTR 7-18-12 Control Percent R1 43 DA-C	ABUTH 6-11-12 Control Percent V5 6 DA-C	ABUTH 7-18-12 Control Percent R1 43 DA-C
9	NK 68B Agrisure 3000 GT w/Cruiser									99	99	99	99
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A				
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
10	NK 68B Agrisure Viptera 3111 w/Cruiser									97	97	87	90
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A				
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
11	NK 68B Agrisure Viptera 3111 w/Cruiser									97	99	99	99
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B				
12	NK 68B Agrisure Viptera 3111 w/Cruiser									98	99	99	99
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A				
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
13	NK 68B Agrisure 3000 GT w/Cruiser									97	99	97	97
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A				
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D				
14	NK 68B Agrisure 3000 GT w/Cruiser									99	99	99	99
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D				
15	NK 68B Agrisure 3000 GT w/Cruiser									99	99	99	99
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A				
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D				
16	NK 68B Agrisure Viptera 3111 w/Cruiser									95	97	95	97
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A				
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D				
17	NK 68B Agrisure Viptera 3111 w/Cruiser									99	99	99	99
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D				

Syngenta ICS Corn Trial.

Trial ID: 12-1-W220
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 6-11-12 Control Percent V5 6 DA-C	AMBTR 7-18-12 Control Percent R1 43 DA-C	ABUTH 6-11-12 Control Percent V5 6 DA-C	ABUTH 7-18-12 Control Percent R1 43 DA-C
18	NK 68B Agrisure Viptera 3111 w/Cruiser									99	99	99	99
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A				
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D				
19	NK 68B Agrisure 3000 GT w/Cruiser									97	98	99	96
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A				
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E				
20	NK 68B Agrisure 3000 GT w/Cruiser									98	99	99	99
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E				
21	NK 68B Agrisure 3000 GT w/Cruiser									98	99	98	99
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A				
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E				
22	NK 68B Agrisure Viptera 3111 w/Cruiser									97	99	97	96
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A				
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E				
23	NK 68B Agrisure Viptera 3111 w/Cruiser									99	99	99	99
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E				
24	NK 68B Agrisure Viptera 3111 w/Cruiser									99	99	99	99
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A				
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E				
	LSD (P=.05)									.	.	.	.
	Standard Deviation									.	.	.	.
	CV									.	.	.	.

Syngenta ICS Corn Trial.

Trial ID: 12-1-W220
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	CERCZM ZEAMD 8-10-12 Incidence Percent	CERCZM ZEAMD 8-10-12 Severity Percent	CERCZM ZEAMD 8-24-12 Incidence Percent	CERCZM ZEAMD 8-24-12 Severity Percent	CERCZM ZEAMD 9-7-12 Incidence Percent
1	NK 68B Agrisure 3000 GT w/Cruiser									0	0	0	0	0
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
2	NK 68B Agrisure 3000 GT w/Cruiser									0	0	0	0	0
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
3	NK 68B Agrisure 3000 GT w/Cruiser									0	0	0	0	0
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A					
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
4	NK 68B Agrisure Viptera 3111 w/Cruiser									0	0	0	0	0
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
5	NK 68B Agrisure Viptera 3111 w/Cruiser									0	0	0	0	0
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
6	NK 68B Agrisure Viptera 3111 w/Cruiser									0	0	0	0	0
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A					
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
7	NK 68B Agrisure 3000 GT w/Cruiser									0	0	0	0	0
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
8	NK 68B Agrisure 3000 GT w/Cruiser									0	0	0	0	0
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					

Syngenta ICS Corn Trial.

Trial ID: 12-1-W220
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	CERCZM ZEAMD 8-10-12 Incidence Percent	CERCZM ZEAMD 8-10-12 Severity Percent	CERCZM ZEAMD 8-24-12 Incidence Percent	CERCZM ZEAMD 8-24-12 Severity Percent	CERCZM ZEAMD 9-7-12 Incidence Percent
9	NK 68B Agrisure 3000 GT w/Cruiser									0	0	0	0	0
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A					
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
10	NK 68B Agrisure Viptera 3111 w/Cruiser									0	0	0	0	0
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
11	NK 68B Agrisure Viptera 3111 w/Cruiser									0	0	0	0	0
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					
12	NK 68B Agrisure Viptera 3111 w/Cruiser									0	0	0	0	0
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A					
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
13	NK 68B Agrisure 3000 GT w/Cruiser									0	0	0	0	0
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					
14	NK 68B Agrisure 3000 GT w/Cruiser									0	0	0	0	0
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					
15	NK 68B Agrisure 3000 GT w/Cruiser									0	0	0	0	0
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A					
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					
16	NK 68B Agrisure Viptera 3111 w/Cruiser									0	0	0	0	0
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					
17	NK 68B Agrisure Viptera 3111 w/Cruiser									0	0	0	0	0
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					

Syngenta ICS Corn Trial.

Trial ID: 12-1-W220
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	CERCZM ZEAMD 8-10-12 Incidence Percent	CERCZM ZEAMD 8-10-12 Severity Percent	CERCZM ZEAMD 8-24-12 Incidence Percent	CERCZM ZEAMD 8-24-12 Severity Percent	CERCZM ZEAMD 9-7-12 Incidence Percent
18	NK 68B Agrisure Viptera 3111 w/Cruiser									0	0	0	0	0
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A					
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D					
19	NK 68B Agrisure 3000 GT w/Cruiser									0	0	0	0	0
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
20	NK 68B Agrisure 3000 GT w/Cruiser									0	0	0	0	0
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
21	NK 68B Agrisure 3000 GT w/Cruiser									0	0	0	0	0
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A					
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
22	NK 68B Agrisure Viptera 3111 w/Cruiser									0	0	0	0	0
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
23	NK 68B Agrisure Viptera 3111 w/Cruiser									0	0	0	0	0
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
24	NK 68B Agrisure Viptera 3111 w/Cruiser									0	0	0	0	0
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A					
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C					
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E					
	LSD (P=.05)									.	.	.	.	.
	Standard Deviation									.	.	.	.	.
	CV									.	.	.	.	.

Syngenta ICS Corn Trial.

Trial ID: 12-1-W220
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	CERCZM ZEAMD 9-7-12 Severity Percent	CERCZM ZEAMD 9-21-12 Incidence Percent	CERCZM ZEAMD 9-21-12 Severity Percent
1	NK 68B Agrisure 3000 GT w/Cruiser									0	90	1
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E			
2	NK 68B Agrisure 3000 GT w/Cruiser									0	90	1
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E			
3	NK 68B Agrisure 3000 GT w/Cruiser									0	85	1
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A			
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E			
4	NK 68B Agrisure Viptera 3111 w/Cruiser									0	85	1
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E			
5	NK 68B Agrisure Viptera 3111 w/Cruiser									0	90	1
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E			
6	NK 68B Agrisure Viptera 3111 w/Cruiser									0	85	1
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A			
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E			
7	NK 68B Agrisure 3000 GT w/Cruiser									0	90	10
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
8	NK 68B Agrisure 3000 GT w/Cruiser									0	85	10
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B			

Syngenta ICS Corn Trial.

Trial ID: 12-1-W220
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	CERCZM ZEAMD 9-7-12 Severity Percent	CERCZM ZEAMD 9-21-12 Incidence Percent	CERCZM ZEAMD 9-21-12 Severity Percent
9	NK 68B Agrisure 3000 GT w/Cruiser									0	90	10
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A			
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
10	NK 68B Agrisure Viptera 3111 w/Cruiser									0	90	5
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
11	NK 68B Agrisure Viptera 3111 w/Cruiser									0	90	10
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B			
12	NK 68B Agrisure Viptera 3111 w/Cruiser									0	90	5
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A			
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
13	NK 68B Agrisure 3000 GT w/Cruiser									0	80	10
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D			
14	NK 68B Agrisure 3000 GT w/Cruiser									0	90	10
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D			
15	NK 68B Agrisure 3000 GT w/Cruiser									0	90	10
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A			
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D			
16	NK 68B Agrisure Viptera 3111 w/Cruiser									0	90	5
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D			
17	NK 68B Agrisure Viptera 3111 w/Cruiser									0	80	10
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D			

Syngenta ICS Corn Trial.

Trial ID: 12-1-W220
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	CERCZM ZEAMD 9-7-12 Severity Percent	CERCZM ZEAMD 9-21-12 Incidence Percent	CERCZM ZEAMD 9-21-12 Severity Percent
18	NK 68B Agrisure Viptera 3111 w/Cruiser									0	90	5
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A			
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	V5	D			
19	NK 68B Agrisure 3000 GT w/Cruiser									0	90	1
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E			
20	NK 68B Agrisure 3000 GT w/Cruiser									0	90	2
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E			
21	NK 68B Agrisure 3000 GT w/Cruiser									0	90	1
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A			
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E			
22	NK 68B Agrisure Viptera 3111 w/Cruiser									0	90	2
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	2-4"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E			
23	NK 68B Agrisure Viptera 3111 w/Cruiser									0	90	2
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-1	B			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E			
24	NK 68B Agrisure Viptera 3111 w/Cruiser									0	90	1
	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A			
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-2	C			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R1	E			
	LSD (P=.05)									.	.	.
	Standard Deviation									.	.	.
	CV									.	.	.

Southern Illinois University

Syngenta ICS Corn Trial.

Trial ID: 12-1-W220
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Syngenta.
2. Ratings: Observe and rate any major differences in weed control at V5 and R1 applications.
   Observe and note any disease or insect pressure from R1 to black layer.
3. Yield, test weight, and seed moisture; trim front and back 10 ft of center 2 rows in each plot prior to harvest.
4. Use high fertility to maximize yield potential, seeding rate is 30,000 s/A.
5. Photos of significant treatment differences would be appreciated.
6. Rainfall following the PRE application was 0.18 inch 2 days later, 0.28 inch 12 days later
   and 0.75 inch 23 days later.
7. Ratings at V5 were 23 DA-A, 6 DA-B, and 6 DA-C.
   Ratings at R1 were 60 DA-A, 43 DA-B, and 43 DA-C.
8. CERCZM = Gray leaf spot (Cercospora zeae-maydis).
   Plots were monitored for insects, there was no significant insect pressure observed.
9. Harvested 10-16-12, (2) 30 inch rows by 122 ft.

Bayer One-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-W80
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-16-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate the performance of Corvus, Balance Flexx and Capreno as components of one-pass weed control programs in corn.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 61-06 **Description:** RR2/LL
BBCH Scale: BCOR **Planting Date:** 5-16-12
Planting Method: SEEDED Seeded **Rate, Unit:** 28000 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** SETFA - Setaria faberi Herrm.
Common Name: foxtail, giant

Pest 2 Type: W **Code:** AMBTR - Ambrosia trifida L.
Common Name: ragweed, giant

Pest 3 Type: W **Code:** ABUTH - Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 4 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT
Plot Area, Unit: 280 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 150 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 1.6 **Texture:** SIL SILT LOAM
pH: 5.9 **Soil Name:** PIERRON
CEC: 6

Additional Measured Elements

Element	Quantity	Unit
P1	41	LB/A
K	257	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Bayer One-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-W80
Location: Belleville Res. Center
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-24-12					7	DAY	42.6	74.3	F
2.	4-29-12	3.06	IN	RAIN	rain					
3.	4-30-12	0.66	IN	RAIN	rain					
4.	5-1-12	0.13	IN	RAIN	rain					
5.	5-1-12					7	DAY	33.5	76	F
6.	5-4-12	0.25	IN	RAIN	rain					
7.	5-7-12	0.29	IN	RAIN	rain					
8.	5-8-12					7	DAY	47.5	87.8	F
9.	5-15-12					7	DAY	37.7	81.3	F
10.	5-21-12	0.18	IN	RAIN	rain					
11.	5-22-12					7	DAY	47.6	82.3	F
12.	5-29-12					7	DAY	48.1	90	F
13.	5-30-12	0.07	IN	RAIN	rain					
14.	5-31-12	0.21	IN	RAIN	rain					
15.	6-5-12					7	DAY	50.2	90.1	F
16.	6-11-12	0.75	IN	RAIN	rain					
17.	6-12-12					7	DAY	52.4	93.6	F
18.	6-17-12	0.36	IN	RAIN	rain					
19.	6-19-12					7	DAY	56.3	94	F
20.	6-26-12					7	DAY	51.8	105.4	F
21.	7-3-12					7	DAY	68.9	104.7	F
22.	7-8-12	0.28	IN	RAIN	rain					
23.	7-10-12					7	DAY	63.4	95	F
24.	7-17-12					7	DAY	61	102.2	F
25.	7-24-12					7	DAY	61	103	F
26.	7-29-12	0.15	IN	RAIN	rain					
27.	7-31-12					7	DAY	60.2	99.1	F
28.	8-5-12	0.18	IN	RAIN	rain					
29.	8-7-12					7	DAY	50.2	99.8	F
30.	8-13-12	0.88	IN	RAIN	rain					
31.	8-14-12					7	DAY	51	95.6	F
32.	8-17-12	1.19	IN	RAIN	rain					
33.	8-21-12					7	DAY	54.7	94.2	F
34.	8-26-12	0.04	IN	RAIN	rain					
35.	8-27-12	1.66	IN	RAIN	rain					
36.	8-31-12	0.11	IN	RAIN	rain					

Application Description

	A	B
Application Date:	5-17-12	5-29-12
Time of Day:	14:15	16:45
Application Method:	Spray	Spray
Application Timing:	PRE	V2
Application Placement:	BROFOL	BROFOL
Applied By:	RJW	JRK
Air Temperature, Unit:	79 F	88 F
% Relative Humidity:	29	31
Wind Velocity, Unit:	6 MPH	2 MPH
Wind Direction:	E	S
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	61 F	68 F
Soil Moisture:	BELNOR	BELNOR
% Cloud Cover:	30	0
Next Rain Occurred On:	5-21-12	5-31-12

Bayer One-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-W80
Location: Belleville Res. Center
Investigator: Bryan Young

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	ZEAMD BCOR
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	V3
Stage Minimum, Percent:		V2
Stage Maximum, Percent:		V3
Height, Unit:		6 IN
Height Minimum, Maximum:		4 6

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	SETFA W DESC	SETFA W DESC
Stage Majority, Percent:	NA	2
Stage Minimum, Percent:		1
Stage Maximum, Percent:		3
Height, Unit:		1 IN
Height Minimum, Maximum:		0.5 3
Density, Unit:		0.1 FT2
Pest 2 Code, Type, Scale:	AMBTR W DESC	AMBTR W DESC
Stage Majority, Percent:	NA	2
Stage Minimum, Percent:		Coty
Stage Maximum, Percent:		4
Height, Unit:		2 IN
Height Minimum, Maximum:		1 3
Density, Unit:		0.1 FT2
Pest 3 Code, Type, Scale:	ABUTH W DESC	ABUTH W DESC
Stage Majority, Percent:	NA	2
Stage Minimum, Percent:		Coty
Stage Maximum, Percent:		4
Height, Unit:		1 IN
Height Minimum, Maximum:		0.5 2
Density, Unit:		0.01 FT2
Pest 4 Code, Type, Scale:	AMATA W DESC	AMATA W DESC
Stage Majority, Percent:	NA	2
Stage Minimum, Percent:		Coty
Stage Maximum, Percent:		4
Height, Unit:		2 IN
Height Minimum, Maximum:		0.5 3
Density, Unit:		0.3 FT2

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA

Bayer One-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-W80
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 10-9-12 Moisture Percent	ZEAMD 10-9-12 Test wt. lb/bu	ZEAMD 10-9-12 Yield bu/A
	Pest Code											
	Crop Code											
	Rating Date											
	Rating Type											
	Rating Unit											
	Rating Timing											
	Trt-Eval Interval											
1	NONTREATED									17.1 a	57.2 a	30 e
2	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	17.7 a	56.9 a	89 ab
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A			
3	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	16.1 a	57.4 a	60 cd
	CLARITY	4	SL	0.25	lb ae/a	0.5	pt/a	PRE	A			
4	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	16.9 a	57.1 a	68 bcd
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	PRE	A			
5	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	16.3 a	57.3 a	59 cd
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A			
6	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	17.1 a	57.0 a	70 a-d
	HARNESS	7	EC	1.97	lb ai/a	2.25	pt/a	PRE	A			
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A			
7	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	17.0 a	56.8 a	50 de
	CLARITY	4	SL	0.25	lb ae/a	0.5	pt/a	PRE	A			
8	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	17.3 a	57.0 a	71 a-d
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	PRE	A			
9	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V2	B	17.8 a	56.8 a	86 ab
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B			
10	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V2	B	17.2 a	57.1 a	89 ab
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2	B			
	CLARITY	4	SL	0.25	lb ae/a	0.5	pt/a	V2	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B			
11	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V2	B	17.2 a	57.1 a	91 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2	B			
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	V2	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B			
12	LEXAR	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	16.8 a	57.1 a	60 cd
13	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	V2	B	17.4 a	57.0 a	92 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B			
14	HARNESS XTRA 5.6	5.6	EC	4.2	lb ai/a	3	qt/a	PRE	A	18.4 a	56.5 a	77 abc
	LSD (P=.05)									1.26	0.49	23.4
	Standard Deviation									0.75	0.29	13.9
	CV									4.38	0.51	19.74
	Replicate F									5.491	3.762	7.785
	Replicate Prob(F)									0.0103	0.0367	0.0022
	Treatment F									1.756	1.982	5.083
	Treatment Prob(F)									0.1075	0.0668	0.0002

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Bayer One-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-W80
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 6-1-12 Injury Percent 3 DA-B 10 DAE	ZEAMD 6-5-12 Injury Percent 15 DA-A 7 DA-B	ZEAMD 7-3-12 Injury Percent 47 DA-A 35 DA-B	ZEAMD 7-24-12 Injury Percent 68 DA-A 56 DA-B
1	NONTREATED									0 d	0 b	0 a	0 a
2	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	0 d	0 b	0 a	0 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A				
3	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	0 d	0 b	0 a	0 a
	CLARITY	4	SL	0.25	lb ae/a	0.5	pt/a	PRE	A				
4	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	0 d	0 b	0 a	0 a
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	PRE	A				
5	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	0 d	0 b	0 a	0 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A				
6	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	0 d	0 b	0 a	0 a
	HARNESS	7	EC	1.97	lb ai/a	2.25	pt/a	PRE	A				
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A				
7	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	0 d	0 b	0 a	0 a
	CLARITY	4	SL	0.25	lb ae/a	0.5	pt/a	PRE	A				
8	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	0 d	0 b	0 a	0 a
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	PRE	A				
9	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V2	B	4 b	2 a	0 a	0 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B				
10	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V2	B	5 a	2 a	0 a	0 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2	B				
	CLARITY	4	SL	0.25	lb ae/a	0.5	pt/a	V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B				
11	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V2	B	5 a	3 a	0 a	0 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2	B				
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B				
12	LEXAR	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	0 d	0 b	0 a	0 a
13	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	V2	B	3 c	0 b	0 a	0 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B				
14	HARNESS XTRA 5.6	5.6	EC	4.2	lb ai/a	3	qt/a	PRE	A	0 d	0 b	0 a	0 a
LSD (P=.05)										0.5	1.1	0.0	0.0
Standard Deviation										0.3	0.6	0.0	0.0
CV										24.93	125.79	0.0	0.0
Replicate F										1.000	2.167	0.000	0.000
Replicate Prob(F)										0.3816	0.1348	1.0000	1.0000
Treatment F										136.462	7.875	0.000	0.000
Treatment Prob(F)										0.0001	0.0001	1.0000	1.0000

Bayer One-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-W80
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	SETFA	SETFA	SETFA	SETFA
	Pest Code									SETFA	SETFA	SETFA	SETFA
	Crop Code												
	Rating Date									6-1-12	6-5-12	7-3-12	7-24-12
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing									3 DA-B	15 DA-A	47 DA-A	68 DA-A
	Trt-Eval Interval									10 DAE	7 DA-B	35 DA-B	56 DA-B
1	NONTREATED									0 g	0 f	0 f	0 f
2	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	82 bc	84 c	75 bc	75 bc
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A				
3	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	75 cd	73 d	70 cd	65 cd
	CLARITY	4	SL	0.25	lb ae/a	0.5	pt/a	PRE	A				
4	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	75 cd	72 de	63 cde	62 cd
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	PRE	A				
5	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	75 cd	73 d	72 bcd	67 c
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A				
6	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	96 a	93 ab	89 a	83 ab
	HARNESS	7	EC	1.97	lb ai/a	2.25	pt/a	PRE	A				
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A				
7	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	65 d	63 e	53 e	47 e
	CLARITY	4	SL	0.25	lb ae/a	0.5	pt/a	PRE	A				
8	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	67 d	70 de	58 de	52 de
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	PRE	A				
9	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V2	B	33 f	99 a	97 a	97 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B				
10	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V2	B	33 f	99 a	97 a	97 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2	B				
	CLARITY	4	SL	0.25	lb ae/a	0.5	pt/a	V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B				
11	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V2	B	33 f	99 a	97 a	97 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2	B				
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B				
12	LEXAR	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	50 e	87 bc	75 bc	70 bc
13	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	V2	B	33 f	99 a	97 a	97 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B				
14	HARNESS XTRA 5.6	5.6	EC	4.2	lb ai/a	3	qt/a	PRE	A	93 ab	93 ab	85 ab	82 b
	LSD (P=.05)									12.3	8.4	13.8	14.4
	Standard Deviation									7.3	5.0	8.2	8.6
	CV									12.63	6.34	11.19	12.1
	Replicate F									1.204	3.325	1.396	2.065
	Replicate Prob(F)									0.3162	0.0518	0.2656	0.1472
	Treatment F									43.493	81.062	29.839	28.837
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

Bayer One-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-W80
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 6-1-12 Control Percent 3 DA-B 10 DAE	AMBTR 6-5-12 Control Percent 15 DA-A 7 DA-B	AMBTR 7-3-12 Control Percent 47 DA-A 35 DA-B	AMBTR 7-24-12 Control Percent 68 DA-A 56 DA-B
1	NONTREATED									0 e	0 g	0 f	0 f
2	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	70 ab	67 cde	80 cd	83 abc
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A				
3	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	78 a	77 bc	82 bcd	82 abc
	CLARITY	4	SL	0.25	lb ae/a	0.5	pt/a	PRE	A				
4	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	77 a	75 bcd	80 cd	81 abc
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	PRE	A				
5	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	47 c	48 f	62 e	60 e
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A				
6	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	63 b	65 de	67 de	62 de
	HARNESS	7	EC	1.97	lb ai/a	2.25	pt/a	PRE	A				
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A				
7	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	63 b	62 e	63 e	55 e
	CLARITY	4	SL	0.25	lb ae/a	0.5	pt/a	PRE	A				
8	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	67 ab	68 b-e	77 cde	80 bc
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	PRE	A				
9	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V2	B	37 cd	98 a	96 ab	97 ab
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B				
10	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V2	B	37 cd	97 a	98 a	99 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2	B				
	CLARITY	4	SL	0.25	lb ae/a	0.5	pt/a	V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B				
11	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V2	B	40 cd	98 a	98 a	99 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2	B				
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B				
12	LEXAR	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	47 c	78 b	83 abc	91 abc
13	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	V2	B	33 d	98 a	98 a	98 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B				
14	HARNESS XTRA 5.6	5.6	EC	4.2	lb ai/a	3	qt/a	PRE	A	75 ab	72 b-e	77 cde	79 cd
LSD (P=.05)										13.2	11.4	15.6	18.3
Standard Deviation										7.9	6.8	9.3	10.9
CV										15.02	9.46	12.3	14.29
Replicate F										3.301	3.619	1.061	1.939
Replicate Prob(F)										0.0528	0.0410	0.3607	0.1641
Treatment F										23.683	43.497	21.830	17.569
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

Bayer One-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-W80
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ABUTH 6-1-12 Control Percent 3 DA-B 10 DAE	ABUTH 6-5-12 Control Percent 15 DA-A 7 DA-B	ABUTH 7-3-12 Control Percent 47 DA-A 35 DA-B	ABUTH 7-24-12 Control Percent 68 DA-A 56 DA-B
1	NONTREATED									0 e	0 d	0 d	0 d
2	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	93 ab	91 ab	93 ab	89 ab
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A				
3	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	99 a	99 a	99 a	99 a
	CLARITY	4	SL	0.25	lb ae/a	0.5	pt/a	PRE	A				
4	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	99 a	94 ab	95 ab	93 ab
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	PRE	A				
5	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	93 ab	91 ab	83 bc	85 abc
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A				
6	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	93 ab	90 ab	90 ab	90 ab
	HARNESS	7	EC	1.97	lb ai/a	2.25	pt/a	PRE	A				
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A				
7	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	75 bc	71 c	71 c	70 c
	CLARITY	4	SL	0.25	lb ae/a	0.5	pt/a	PRE	A				
8	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	93 ab	86 abc	83 bc	83 bc
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	PRE	A				
9	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V2	B	28 d	99 a	99 a	99 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B				
10	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V2	B	37 d	99 a	99 a	99 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2	B				
	CLARITY	4	SL	0.25	lb ae/a	0.5	pt/a	V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B				
11	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V2	B	30 d	99 a	99 a	99 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2	B				
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B				
12	LEXAR	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	60 c	90 ab	90 ab	90 ab
13	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	V2	B	23 d	99 a	99 a	99 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B				
14	HARNESS XTRA 5.6	5.6	EC	4.2	lb ai/a	3	qt/a	PRE	A	85 ab	82 bc	87 ab	88 ab
LSD (P=.05)										21.3	16.2	14.4	16.0
Standard Deviation										12.7	9.6	8.6	9.5
CV										19.55	11.33	10.12	11.24
Replicate F										1.656	2.113	3.057	2.666
Replicate Prob(F)										0.2112	0.1420	0.0649	0.0893
Treatment F										21.919	21.401	26.964	21.948
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

Bayer One-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-W80
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 6-1-12 Control Percent 3 DA-B 10 DAE	AMATA 6-5-12 Control Percent 15 DA-A 7 DA-B	AMATA 7-3-12 Control Percent 47 DA-A 35 DA-B	AMATA 7-24-12 Control Percent 68 DA-A 56 DA-B
	Pest Code									AMATA	AMATA	AMATA	AMATA
	Crop Code												
	Rating Date									6-1-12	6-5-12	7-3-12	7-24-12
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing									3 DA-B	15 DA-A	47 DA-A	68 DA-A
	Trt-Eval Interval									10 DAE	7 DA-B	35 DA-B	56 DA-B
1	NONTREATED									0 d	0 c	0 f	0 f
2	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	99 a	99 a	99 a	98 ab
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A				
3	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	99 a	98 a	87 de	85 de
	CLARITY	4	SL	0.25	lb ae/a	0.5	pt/a	PRE	A				
4	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	98 a	98 ab	92 cd	90 b-e
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	PRE	A				
5	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	99 a	99 a	92 bcd	92 a-d
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A				
6	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	99 a	99 a	99 a	96 abc
	HARNESS	7	EC	1.97	lb ai/a	2.25	pt/a	PRE	A				
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A				
7	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	99 a	96 b	83 e	83 e
	CLARITY	4	SL	0.25	lb ae/a	0.5	pt/a	PRE	A				
8	BALANCE FLEXX	2	SC	0.094	lb ai/a	6	fl oz/a	PRE	A	99 a	99 a	90 d	88 cde
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	PRE	A				
9	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V2	B	37 c	99 a	98 abc	98 ab
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B				
10	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V2	B	40 c	99 a	99 a	99 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2	B				
	CLARITY	4	SL	0.25	lb ae/a	0.5	pt/a	V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B				
11	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V2	B	40 c	99 a	99 a	99 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2	B				
	CLARITY	4	SL	0.5	lb ae/a	1	pt/a	V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B				
12	LEXAR	3.7	SC	2.78	lb ai/a	3	qt/a	PRE	A	70 b	99 a	98 abc	98 ab
13	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	V2	B	37 c	99 a	98 ab	98 ab
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	V2	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	B				
14	HARNESS XTRA 5.6	5.6	EC	4.2	lb ai/a	3	qt/a	PRE	A	99 a	99 a	99 a	99 a
	LSD (P=.05)									18.3	1.5	6.5	8.6
	Standard Deviation									10.9	0.9	3.9	5.1
	CV									14.99	0.99	4.43	5.87
	Replicate F									0.242	1.496	0.382	1.015
	Replicate Prob(F)									0.7869	0.2428	0.6860	0.3765
	Treatment F									30.351	2520.755	132.173	75.611
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Bayer One-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-W80
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Bayer (BLM).
2. Ratings: CI/WC at 10 DAE and at 7, 35, and 56 DA-B.
3. Yield.
4. Take photos prior to canopy closure (about 35 DA-B rating or earlier).
5. Rainfall following the PRE application was 0.18 inch 4 days later and 0.28 inch 14 days later.
   Rainfall following the V2 application was 0.28 inch 2 days later and 0.75 inch 13 days later.
6. DAE = Days after crop emergence.
   Ratings at 10 DAE were also 15 DA-A and 3 DA-B.
7. Harvested 10-9-12, (2) 30 inch rows by 25 ft.

Bayer Two-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-MW70
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-16-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate the performance of Bayer two-pass corn weed control programs in corn compared with competitive programs.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 61-06 **Description:** RR2/LL
BBCH Scale: BCOR **Planting Date:** 5-16-12
Planting Method: SEEDED Seeded **Rate, Unit:** 28000 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** SETFA - Setaria faberi Herrm.
Common Name: foxtail, giant

Pest 2 Type: W **Code:** ABUTH - Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 3 Type: W **Code:** AMBTR - Ambrosia trifida L.
Common Name: ragweed, giant

Pest 4 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT
Plot Area, Unit: 280 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 150 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 1.6 **Texture:** SIL SILT LOAM
pH: 5.9 **Soil Name:** PIERRON
CEC: 6

Additional Measured Elements

Element	Quantity	Unit
P1	41	LB/A
K	257	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Bayer Two-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-MW70
Location: Belleville Res. Center
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-24-12					7	DAY	42.6	74.3	F
2.	4-29-12	3.06	IN	RAIN	rain					
3.	4-30-12	0.66	IN	RAIN	rain					
4.	5-1-12	0.13	IN	RAIN	rain					
5.	5-1-12					7	DAY	33.5	76	F
6.	5-4-12	0.25	IN	RAIN	rain					
7.	5-7-12	0.29	IN	RAIN	rain					
8.	5-8-12					7	DAY	47.5	87.8	F
9.	5-15-12					7	DAY	37.7	81.3	F
10.	5-21-12	0.18	IN	RAIN	rain					
11.	5-22-12					7	DAY	47.6	82.3	F
12.	5-29-12					7	DAY	48.1	90	F
13.	5-30-12	0.07	IN	RAIN	rain					
14.	5-31-12	0.21	IN	RAIN	rain					
15.	6-5-12					7	DAY	50.2	90.1	F
16.	6-11-12	0.75	IN	RAIN	rain					
17.	6-12-12					7	DAY	52.4	93.6	F
18.	6-17-12	0.36	IN	RAIN	rain					
19.	6-19-12					7	DAY	56.3	94	F
20.	6-26-12					7	DAY	51.8	105.4	F
21.	7-3-12					7	DAY	68.9	104.7	F
22.	7-8-12	0.28	IN	RAIN	rain					
23.	7-10-12					7	DAY	63.4	95	F
24.	7-17-12					7	DAY	61	102.2	F
25.	7-24-12					7	DAY	61	103	F
26.	7-29-12	0.15	IN	RAIN	rain					
27.	7-31-12					7	DAY	60.2	99.1	F
28.	8-5-12	0.18	IN	RAIN	rain					
29.	8-7-12					7	DAY	50.2	99.8	F
30.	8-13-12	0.88	IN	RAIN	rain					
31.	8-14-12					7	DAY	51	95.6	F
32.	8-17-12	1.19	IN	RAIN	rain					
33.	8-21-12					7	DAY	54.7	94.2	F
34.	8-26-12	0.04	IN	RAIN	rain					
35.	8-27-12	1.66	IN	RAIN	rain					
36.	8-31-12	0.11	IN	RAIN	rain					

Application Description

	A	B
Application Date:	5-17-12	6-4-12
Time of Day:	14:15	13:30
Application Method:	Spray	Spray
Application Timing:	PRE	V3-V5
Application Placement:	BROFOL	BROFOL
Applied By:	LAH	JRK
Air Temperature, Unit:	79 F	87 F
% Relative Humidity:	29	47
Wind Velocity, Unit:	6 MPH	4 MPH
Wind Direction:	E	SW
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	61 F	71 F
Soil Moisture:	BELNOR	BELNOR
% Cloud Cover:	90	20
Next Rain Occurred On:	5-21-12	6-11-12

Bayer Two-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-MW70
Location: Belleville Res. Center
Investigator: Bryan Young

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	ZEAMD BCOR
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	V5
Stage Minimum, Percent:		V4
Stage Maximum, Percent:		V5
Height, Unit:		12 IN
Height Minimum, Maximum:		9 12

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	SETFA W DESC	SETFA W DESC
Stage Majority, Percent:	NA	2
Stage Minimum, Percent:		1
Stage Maximum, Percent:		3
Height, Unit:		1 IN
Height Minimum, Maximum:		0.5 1
Density, Unit:		0.01 FT2
Pest 2 Code, Type, Scale:	ABUTH W DESC	ABUTH W DESC
Stage Majority, Percent:	NA	2
Stage Minimum, Percent:		Coty
Stage Maximum, Percent:		3
Height, Unit:		1 IN
Height Minimum, Maximum:		0.5 1
Density, Unit:		0.01 FT2
Pest 3 Code, Type, Scale:	AMBTR W DESC	AMBTR W DESC
Stage Majority, Percent:	NA	4
Stage Minimum, Percent:		2
Stage Maximum, Percent:		6
Height, Unit:		2 IN
Height Minimum, Maximum:		1 4
Density, Unit:		0.1 FT2
Pest 4 Code, Type, Scale:	AMATA W DESC	AMATA W DESC
Stage Majority, Percent:	NA	4
Stage Minimum, Percent:		2
Stage Maximum, Percent:		6
Height, Unit:		1 IN
Height Minimum, Maximum:		0.5 3
Density, Unit:		0.01 FT2

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA

Bayer Two-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-MW70
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 10-9-12 Moisture Percent	ZEAMD 10-9-12 Test wt. lb/bu	ZEAMD 10-9-12 Yield bu/A	ZEAMD 6-1-12 Injury Percent 10 DAE -3 DA-B	ZEAMD 6-11-12 Injury Percent 20 DAE 7 DA-B	ZEAMD 7-9-12 Injury Percent 35 DA-B
1	NONTREATED									16.4 de	57.2 a-d	36 c	0 a	0 d	0 a
2	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	A	17.1 a-d	57.0 b-f	96 ab	0 a	0 d	0 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
3	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	A	17.2 abc	56.9 c-f	101 ab	0 a	2 d	0 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
4	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	A	17.8 a	56.7 f	105 a	0 a	12 b	0 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
5	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	A	17.7 a	56.8 ef	102 ab	0 a	15 a	0 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
6	BALANCE FLEXX	2	SC	0.047	lb ai/a	3	fl oz/a	PRE	A	16.8 b-e	57.1 a-e	88 ab	0 a	1 d	0 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
7	BALANCE FLEXX	2	SC	0.047	lb ai/a	3	fl oz/a	PRE	A	17.1 a-d	57.1 b-f	98 ab	0 a	7 c	0 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
8	BALANCE FLEXX	2	SC	0.047	lb ai/a	3	fl oz/a	PRE	A	17.4 ab	56.9 def	100 ab	0 a	10 b	0 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
9	BALANCE FLEXX	2	SC	0.047	lb ai/a	3	fl oz/a	PRE	A	17.3 ab	56.9 c-f	90 ab	0 a	17 a	0 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Bayer Two-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-MW70
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 10-9-12 Moisture Percent	ZEAMD 10-9-12 Test wt. lb/bu	ZEAMD 10-9-12 Yield bu/A	ZEAMD 6-1-12 Injury Percent 10 DAE -3 DA-B	ZEAMD 6-11-12 Injury Percent 20 DAE 7 DA-B	ZEAMD 7-9-12 Injury Percent 35 DA-B
	Pest Code														
	Crop Code														
	Rating Date														
	Rating Type														
	Rating Unit														
	Rating Timing														
	Trt-Eval Interval														
10	BALANCE FLEXX	2	SC	0.047	lb ai/a	3	fl oz/a	PRE	A	16.1 e	57.5 a	85 b	0 a	0 d	0 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A						
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	V3-V5	B						
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
11	BALANCE FLEXX	2	SC	0.047	lb ai/a	3	fl oz/a	PRE	A	17.1 a-d	57.0 b-f	102 ab	0 a	0 d	0 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A						
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	V3-V5	B						
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
12	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	16.3 de	57.4 ab	89 ab	0 a	0 d	0 a
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	V3-V5	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V3-V5	B						
13	HARNESS XTRA 5.6	5.6	EC	4.2	lb ai/a	3	qt/a	PRE	A	16.5 cde	57.3 abc	95 ab	0 a	0 d	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
14	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	A	16.8 b-e	57.1 a-e	91 ab	0 a	5 c	0 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	V3-V5	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
	LSD (P=.05)									0.81	0.40	18.8	0.0	2.7	0.0
	Standard Deviation									0.48	0.24	11.2	0.0	1.6	0.0
	CV									2.83	0.42	12.21	0.0	33.81	0.0
	Replicate F									4.960	4.858	1.716	0.000	1.106	0.000
	Replicate Prob(F)									0.0153	0.0165	0.2003	1.0000	0.3467	1.0000
	Treatment F									3.287	2.640	6.994	0.000	41.916	0.000
	Treatment Prob(F)									0.0052	0.0180	0.0001	1.0000	0.0001	1.0000

Bayer Two-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-MW70
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	SETFA 6-1-12 Control Percent 15 DA-A -3 DA-B	SETFA 6-11-12 Control Percent 20 DAE 7 DA-B	SETFA 7-9-12 Control Percent 35 DA-B	ABUTH 6-1-12 Control Percent 15 DA-A -3 DA-B	ABUTH 6-11-12 Control Percent 20 DAE 7 DA-B	ABUTH 7-9-12 Control Percent 35 DA-B
1	NONTREATED									0 e	0 b	0 c	0 d	0 b	0 c
2	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	A	83 bc	99 a	97 a	71 bc	99 a	99 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
3	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	A	82 bcd	99 a	97 a	86 ab	99 a	96 b
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
4	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	A	90 ab	99 a	97 a	92 a	99 a	99 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
5	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	A	83 bc	99 a	98 a	93 a	99 a	99 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
6	BALANCE FLEXX	2	SC	0.047	lb ai/a	3	fl oz/a	PRE	A	75 cd	99 a	97 a	88 ab	99 a	99 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
7	BALANCE FLEXX	2	SC	0.047	lb ai/a	3	fl oz/a	PRE	A	77 cd	99 a	97 a	83 ab	99 a	99 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
8	BALANCE FLEXX	2	SC	0.047	lb ai/a	3	fl oz/a	PRE	A	80 bcd	99 a	97 a	87 ab	99 a	99 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
9	BALANCE FLEXX	2	SC	0.047	lb ai/a	3	fl oz/a	PRE	A	78 bcd	99 a	97 a	83 ab	99 a	99 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						

Bayer Two-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-MW70
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	SETFA 6-1-12 Control Percent 15 DA-A -3 DA-B	SETFA 6-11-12 Control Percent 20 DAE 7 DA-B	SETFA 7-9-12 Control Percent 35 DA-B	ABUTH 6-1-12 Control Percent 15 DA-A -3 DA-B	ABUTH 6-11-12 Control Percent 20 DAE 7 DA-B	ABUTH 7-9-12 Control Percent 35 DA-B
10	BALANCE FLEXX	2	SC	0.047	lb ai/a	3	fl oz/a	PRE	A	70 d	99 a	90 b	88 ab	99 a	99 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A						
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	V3-V5	B						
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
11	BALANCE FLEXX	2	SC	0.047	lb ai/a	3	fl oz/a	PRE	A	78 bcd	99 a	93 b	93 a	99 a	99 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A						
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	V3-V5	B						
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
12	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	73 cd	99 a	98 a	99 a	99 a	99 a
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	V3-V5	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V3-V5	B						
13	HARNESS XTRA 5.6	5.6	EC	4.2	lb ai/a	3	qt/a	PRE	A	96 a	99 a	98 a	53 c	99 a	97 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
14	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	A	83 bc	99 a	97 a	87 ab	99 a	99 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	V3-V5	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
LSD (P=.05)										12.0	0.0	2.9	20.3	0.0	2.8
Standard Deviation										7.2	0.0	1.7	12.1	0.0	1.6
CV										9.54	0.0	1.91	15.35	0.0	1.79
Replicate F										0.539	0.000	2.112	1.162	0.000	1.990
Replicate Prob(F)										0.5896	1.0000	0.1421	0.3287	1.0000	0.1577
Treatment F										29.917	0.000	687.385	13.063	0.000	775.233
Treatment Prob(F)										0.0001	1.0000	0.0001	0.0001	1.0000	0.0001

Bayer Two-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-MW70
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 6-1-12 Control Percent 15 DA-A -3 DA-B	AMBTR 6-11-12 Control Percent 20 DAE 7 DA-B	AMBTR 7-9-12 Control Percent 35 DA-B	AMATA 6-1-12 Control Percent 15 DA-A -3 DA-B	AMATA 6-11-12 Control Percent 20 DAE 7 DA-B	AMATA 7-9-12 Control Percent 35 DA-B
1	NONTREATED									0 f	0 b	0 b	0 c	0 b	0 b
2	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	A	57 cd	99 a	99 a	99 a	99 a	99 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
3	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	A	50 de	99 a	99 a	99 a	99 a	99 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
4	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	A	70 ab	99 a	99 a	99 a	99 a	99 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
5	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	PRE	A	63 bc	99 a	99 a	99 a	99 a	99 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
6	BALANCE FLEXX	2	SC	0.047	lb ai/a	3	fl oz/a	PRE	A	68 abc	99 a	99 a	99 a	99 a	99 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
7	BALANCE FLEXX	2	SC	0.047	lb ai/a	3	fl oz/a	PRE	A	73 ab	99 a	99 a	99 a	99 a	99 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
8	BALANCE FLEXX	2	SC	0.047	lb ai/a	3	fl oz/a	PRE	A	78 a	99 a	99 a	99 a	99 a	99 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
9	BALANCE FLEXX	2	SC	0.047	lb ai/a	3	fl oz/a	PRE	A	73 ab	99 a	99 a	99 a	99 a	99 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						

Bayer Two-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-MW70
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 6-1-12 Control Percent 15 DA-A -3 DA-B	AMBTR 6-11-12 Control Percent 20 DAE 7 DA-B	AMBTR 7-9-12 Control Percent 35 DA-B	AMATA 6-1-12 Control Percent 15 DA-A -3 DA-B	AMATA 6-11-12 Control Percent 20 DAE 7 DA-B	AMATA 7-9-12 Control Percent 35 DA-B
10	BALANCE FLEXX	2	SC	0.047	lb ai/a	3	fl oz/a	PRE	A	78 a	99 a	99 a	99 a	99 a	99 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A						
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	V3-V5	B						
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
11	BALANCE FLEXX	2	SC	0.047	lb ai/a	3	fl oz/a	PRE	A	78 a	99 a	99 a	99 a	99 a	99 a
	AATREX	4	SC	1.5	lb ai/a	1.5	qt/a	PRE	A						
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	V3-V5	B						
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V3-V5	B						
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
12	LEXAR	3.7	SC	1.39	lb ai/a	1.5	qt/a	PRE	A	43 e	99 a	98 a	98 b	99 a	99 a
	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	V3-V5	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V3-V5	B						
13	HARNESS XTRA 5.6	5.6	EC	4.2	lb ai/a	3	qt/a	PRE	A	67 abc	99 a	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V3-V5	B						
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
14	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	A	63 bc	99 a	98 a	99 a	99 a	99 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	V3-V5	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	V3-V5	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V3-V5	B						
LSD (P=.05)										12.4	0.0	0.8	1.0	0.0	0.0
Standard Deviation										7.4	0.0	0.5	0.6	0.0	0.0
CV										12.0	0.0	0.49	0.67	0.0	0.0
Replicate F										6.098	0.000	0.463	1.000	0.000	0.000
Replicate Prob(F)										0.0072	1.0000	0.6347	0.3816	1.0000	1.0000
Treatment F										23.278	0.000	10189.077	5502.640	0.000	0.000
Treatment Prob(F)										0.0001	1.0000	0.0001	0.0001	1.0000	1.0000

Southern Illinois University

Bayer Two-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-MW70
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Bayer (BLN).
2. Ratings: CI/WC at 10 and 21 DAE (second evaluation should be prior to application B);
   CI/WC at 7 and 35 DA-B.
3. Yield.
4. Take photos around 14-28 DA-B.
5. Rainfall following the PRE application was 0.18 inch 4 days later and 0.28 inch 14 days later.
   Rainfall following the V3-V5 application was 0.75 inch 7 days later and 0.38 inch 13 days later.
6. Missing data for plot 202 was due to an application error.
7. Harvested 10-9-12, (2) 30 inch rows by 25 ft.

Southern Illinois University

BASF Two-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-MME50
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-16-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate the performance of BASF two-pass weed control programs
in corn compared to competitive programs.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 61-06 **Description:** RR2/LL
BBCH Scale: BCOR **Planting Date:** 5-16-12
Planting Method: SEEDED Seeded **Rate, Unit:** 28000 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** GGGAN
Common Name: grasses, annual
Description: Mixture of SETFA and PANDI

Pest 2 Type: W **Code:** CYPES - Cyperus esculentus L.
Common Name: nutsedge, yellow

Pest 3 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 4 Type: W **Code:** ABUTH - Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 5 Type: W **Code:** IPOHE - Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT
Plot Area, Unit: 280 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 150 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 1.6 **Texture:** SIL SILT LOAM
pH: 5.9 **Soil Name:** PIERRON
CEC: 6

Additional Measured Elements

Element	Quantity	Unit
P1	41	LB/A
K	257	LB/A

BASF Two-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-MME50
Location: Belleville Res. Center
Investigator: Bryan Young

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Application Description

	A	B	C
Application Date:	5-17-12	5-25-12	6-4-12
Time of Day:	15:00	6:30	14:45
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	SPK-V2	8-12"CN
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	LAH	JRK	JRK
Air Temperature, Unit:	80 F	76 F	85 F
% Relative Humidity:	26	74	45
Wind Velocity, Unit:	6 MPH	2 MPH	2 MPH
Wind Direction:	E	S	E
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	61 F	69 F	71 F
Soil Moisture:	BELNOR	BELNOR	BELNOR
% Cloud Cover:	30	0	20
Next Rain Occurred On:	5-21-12	5-31-12	6-11-12

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	V1	V5
Stage Minimum, Percent:		SPIKE	V4
Stage Maximum, Percent:		V1	V5
Height, Unit:		3.5 IN	11 IN
Height Minimum, Maximum:		2.5 3.5	8 11

BASF Two-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-MME50
Location: Belleville Res. Center
Investigator: Bryan Young

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	GGGAN W DESC	GGGAN W DESC	GGGAN W DESC
Stage Majority, Percent:	NA	NA	2
Stage Minimum, Percent:			1
Stage Maximum, Percent:			2
Height, Unit:			1 IN
Height Minimum, Maximum:			0.5 1
Density, Unit:			0.001 FT2
Pest 2 Code, Type, Scale:	CYPES W DESC	CYPES W DESC	CYPES W DESC
Stage Majority, Percent:	NA	3	4
Stage Minimum, Percent:		2	2
Stage Maximum, Percent:		4	6
Height, Unit:		2 IN	3 IN
Height Minimum, Maximum:		2 3	2 4
Density, Unit:		0.001 FT2	0.001 FT2
Pest 3 Code, Type, Scale:	AMATA W DESC	AMATA W DESC	AMATA W DESC
Stage Majority, Percent:	NA	NA	2
Stage Minimum, Percent:			Coty
Stage Maximum, Percent:			2
Height, Unit:			1 IN
Height Minimum, Maximum:			0.5 1
Density, Unit:			0.001 FT2
Pest 4 Code, Type, Scale:	ABUTH W DESC	ABUTH W DESC	ABUTH W DESC
Stage Majority, Percent:	NA	Coty	2
Stage Minimum, Percent:		Coty	Coty
Stage Maximum, Percent:		3	4
Height, Unit:		0.25 IN	2 IN
Height Minimum, Maximum:		0.25 1	0.5 3
Density, Unit:		0.01 FT2	0.01 FT2
Pest 5 Code, Type, Scale:	IPOHE W DESC	IPOHE W DESC	IPOHE W DESC
Stage Majority, Percent:	NA	Coty	2
Stage Minimum, Percent:		Coty	Coty
Stage Maximum, Percent:		Coty	3
Height, Unit:		0.5 IN	2 IN
Height Minimum, Maximum:		0.5 0.5	1 3
Density, Unit:		0.01 FT2	0.01 FT2

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

BASF Two-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-MME50
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 5-29-12 Injury Percent 7 DAE	ZEAMD 6-4-12 Injury Percent 0 DA-C	ZEAMD 6-25-12 Injury Percent 21 DA-C	GGGAN 6-4-12 Control Percent 0 DA-C	GGGAN 6-25-12 Control Percent 21 DA-C
1	NONTREATED									0 a	0 a	0 a	0 d	0 e
2	VERDICT	5.57	EC	0.65	lb ai/a	15	fl oz/a	PRE	A	0 a	0 a	0 a	80 c	95 abc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"CN	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	8-12"CN	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	8-12"CN	C					
3	VERDICT	5.57	EC	0.65	lb ai/a	15	fl oz/a	PRE	A	0 a	0 a	0 a	87 bc	98 a
	ARMEZON	2.8	SL	0.0164	lb ai/a	0.75	fl oz/a	8-12"CN	C					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	8-12"CN	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"CN	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	8-12"CN	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	8-12"CN	C					
4	LEXAR	3.7	SC	2.31	lb ai/a	2.5	qt/a	PRE	A	0 a	0 a	0 a	83 c	96 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"CN	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	8-12"CN	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	8-12"CN	C					
5	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	0 a	0 a	0 a	92 ab	98 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"CN	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	8-12"CN	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	8-12"CN	C					
6	VERDICT	5.57	EC	0.65	lb ai/a	15	fl oz/a	PRE	A	0 a	0 a	0 a	92 ab	97 a
	GUARDSMAN MAX	5	SE	0.94	lb ai/a	1.5	pt/a	PRE	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"CN	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	8-12"CN	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	8-12"CN	C					
7	GUARDSMAN MAX	5	SE	2.5	lb ai/a	4	pt/a	SPK-V2	B	0 a	0 a	0 a	98 a	89 bcd
	ARMEZON	2.8	SL	0.0164	lb ai/a	0.75	fl oz/a	SPK-V2	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	SPK-V2	B					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	SPK-V2	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	SPK-V2	B					
8	HALEX GT	4.38	CS	2.2	lb ai/a	4	pt/a	SPK-V2	B	0 a	0 a	0 a	98 a	89 cd
	AATREX	4	SC	1	lb ai/a	1	qt/a	SPK-V2	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPK-V2	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	SPK-V2	B					
9	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	SPK-V2	B	0 a	0 a	0 a	98 a	89 bcd
	AATREX	4	SC	1	lb ai/a	1	qt/a	SPK-V2	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	SPK-V2	B					
	DESTINY HC	100	SL	0.5	% v/v	0.5	% v/v	SPK-V2	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	SPK-V2	B					
10	ANTHEM ATZ	4.5	SE	0.98	lb ai/a	28	fl oz/a	SPK-V2	B	0 a	0 a	0 a	99 a	85 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	SPK-V2	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPK-V2	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	SPK-V2	B					
LSD (P=.05)										0.0	0.0	0.0	6.8	7.2
Standard Deviation										0.0	0.0	0.0	4.0	4.2
CV										0.0	0.0	0.0	4.8	5.04
Replicate F										0.000	0.000	0.000	5.581	1.035
Replicate Prob(F)										1.0000	1.0000	1.0000	0.0130	0.3753
Treatment F										0.000	0.000	0.000	169.402	149.620
Treatment Prob(F)										1.0000	1.0000	1.0000	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

BASF Two-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-MME50
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	CYPES 6-4-12 Control Percent 0 DA-C	CYPES 6-25-12 Control Percent 21 DA-C	AMATA 6-4-12 Control Percent 0 DA-C	AMATA 6-25-12 Control Percent 21 DA-C	ABUTH 6-4-12 Control Percent 0 DA-C	ABUTH 6-25-12 Control Percent 21 DA-C	IPOHE 6-25-12 Control Percent 21 DA-C
1	NONTREATED									0 e	0 d	0 c	0 c	0 d	0 c	0 b
2	VERDICT	5.57	EC	0.65	lb ai/a	15	fl oz/a	PRE	A	70 cd	95 abc	95 b	98 a	43 c	96 ab	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"CN	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	8-12"CN	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	8-12"CN	C							
3	VERDICT	5.57	EC	0.65	lb ai/a	15	fl oz/a	PRE	A	67 cd	96 abc	98 a	99 a	47 c	98 ab	98 a
	ARMEZON	2.8	SL	0.0164	lb ai/a	0.75	fl oz/a	8-12"CN	C							
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	8-12"CN	C							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"CN	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	8-12"CN	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	8-12"CN	C							
4	LEXAR	3.7	SC	2.31	lb ai/a	2.5	qt/a	PRE	A	62 d	98 a	98 a	99 a	96 a	99 a	96 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"CN	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	8-12"CN	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	8-12"CN	C							
5	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	75 c	97 ab	99 a	99 a	98 a	98 ab	98 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"CN	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	8-12"CN	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	8-12"CN	C							
6	VERDICT	5.57	EC	0.65	lb ai/a	15	fl oz/a	PRE	A	68 cd	97 ab	99 a	99 a	85 b	98 ab	95 a
	GUARDSMAN MAX	5	SE	0.94	lb ai/a	1.5	pt/a	PRE	A							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	8-12"CN	C							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	8-12"CN	C							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	8-12"CN	C							
7	GUARDSMAN MAX	5	SE	2.5	lb ai/a	4	pt/a	SPK-V2	B	78 bc	92 bc	99 a	99 a	99 a	98 ab	94 a
	ARMEZON	2.8	SL	0.0164	lb ai/a	0.75	fl oz/a	SPK-V2	B							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	SPK-V2	B							
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	SPK-V2	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	SPK-V2	B							
8	HALEX GT	4.38	CS	2.2	lb ai/a	4	pt/a	SPK-V2	B	92 a	96 abc	99 a	98 a	99 a	98 ab	93 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	SPK-V2	B							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPK-V2	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	SPK-V2	B							
9	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	SPK-V2	B	90 ab	93 abc	99 a	90 b	99 a	92 b	96 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	SPK-V2	B							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	SPK-V2	B							
	DESTINY HC	100	SL	0.5	% v/v	0.5	% v/v	SPK-V2	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	SPK-V2	B							
10	ANTHEM ATZ	4.5	SE	0.98	lb ai/a	28	fl oz/a	SPK-V2	B	91 a	92 c	99 a	99 a	98 a	92 b	93 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	SPK-V2	B							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPK-V2	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	SPK-V2	B							
LSD (P=.05)										12.0	5.1	2.5	3.4	8.5	5.9	5.4
Standard Deviation										7.0	2.9	1.4	2.0	5.0	3.5	3.1
CV										10.1	3.44	1.62	2.23	6.51	3.98	3.65
Replicate F										0.084	2.841	2.149	0.269	3.380	2.442	3.139
Replicate Prob(F)										0.9194	0.0847	0.1456	0.7675	0.0567	0.1152	0.0677
Treatment F										43.467	315.011	1409.810	750.218	144.815	235.544	279.140
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Southern Illinois University

BASF Two-Pass Weed Control Programs in Corn.

Trial ID: 12-2A-MME50
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: BASF.
2. Ratings: CI at 5-7 DAE; CI/WC at 21-28 DAP and at 0 and 21-28 DA-C.
3. Rainfall following the PRE application was 0.18 inch 4 days later and 0.28 inch 14 days later.
   Rainfall following the SPK-V2 application was 0.28 inch 6 days later and 0.75 inch 17 days later.
   Rainfall following the 8-12"CN application was 0.75 inch 7 days later and 0.38 inch 13 days later.
4. GGGAN = Annual grasses including 75% PANDI (fall panicum) and 25% SETFA (giant foxtail).
5. DAE = Days after crop emergence.
   Ratings at 7 DAE were also 12 DA-A and 4 BA-B.
   Ratings at 0 DA-C were also 18 DA-A and 10 DA-B.
6. Low weed density at postemergence applications was due to dry soil conditions.
7. Not harvested.

Southern Illinois University

Prequel Evaluation in Corn.

Trial ID: 12-2A-MMW40
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-16-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate the performance of Prequel weed control programs in corn compared with competitive programs.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 61-06 **Description:** RR2/LL
BBCH Scale: BCOR **Planting Date:** 5-16-12
Planting Method: SEEDED Seeded **Rate, Unit:** 28000 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** GGGAN
Common Name: grasses, annual
Description: Mixture of SETFA and PANDI

Pest 2 Type: W **Code:** AMBTR - Ambrosia trifida L.
Common Name: ragweed, giant

Pest 3 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 4 Type: W **Code:** ABUTH - Abutilon theophrasti Medik.
Common Name: velvetleaf

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT
Plot Area, Unit: 280 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 150 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 1.6 **Texture:** SIL SILT LOAM
pH: 5.9 **Soil Name:** PIERRON
CEC: 6

Additional Measured Elements

Element	Quantity	Unit
P1	41	LB/A
K	257	LB/A

Prequel Evaluation in Corn.

Trial ID: 12-2A-MMW40
Location: Belleville Res. Center
Investigator: Bryan Young

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Application Description

	A	B
Application Date:	5-17-12	6-13-12
Time of Day:	15:00	10:15
Application Method:	Spray	Spray
Application Timing:	PRE	28DAP
Application Placement:	BROFOL	BROFOL
Applied By:	RJW	JRK
Air Temperature, Unit:	79 F	73 F
% Relative Humidity:	29	41
Wind Velocity, Unit:	6 MPH	3 MPH
Wind Direction:	E	SW
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	61 F	72 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	30	15
Next Rain Occurred On:	5-21-12	6-16-12

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	ZEAMD BCOR
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	V6
Stage Minimum, Percent:		V5
Stage Maximum, Percent:		V6
Height, Unit:		22 IN
Height Minimum, Maximum:		17 22

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	GGGAN W DESC	GGGAN W DESC
Stage Majority, Percent:	NA	4
Stage Minimum, Percent:		1
Stage Maximum, Percent:		8
Height, Unit:		3 IN
Height Minimum, Maximum:		0.5 6
Density, Unit:		1 FT2
Pest 2 Code, Type, Scale:	AMBTR W DESC	AMBTR W DESC
Stage Majority, Percent:	NA	6
Stage Minimum, Percent:		2
Stage Maximum, Percent:		14
Height, Unit:		5 IN
Height Minimum, Maximum:		1 10
Density, Unit:		0.5 FT2
Pest 3 Code, Type, Scale:	AMATA W DESC	AMATA W DESC
Stage Majority, Percent:	NA	4
Stage Minimum, Percent:		2
Stage Maximum, Percent:		8
Height, Unit:		2 IN
Height Minimum, Maximum:		1 5
Density, Unit:		0.01 FT2
Pest 4 Code, Type, Scale:	ABUTH W DESC	ABUTH W DESC
Stage Majority, Percent:	NA	4
Stage Minimum, Percent:		2
Stage Maximum, Percent:		6
Height, Unit:		3 IN
Height Minimum, Maximum:		1 5
Density, Unit:		0.01 FT2

Prequel Evaluation in Corn.

Trial ID: 12-2A-MMW40
Location: Belleville Res. Center
Investigator: Bryan Young

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA

Prequel Evaluation in Corn.

Trial ID: 12-2A-MMW40
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 5-30-12 Injury Percent 14 DAP 13 DA-A	ZEAMD 6-13-12 Injury Percent 28 DAP 27 DA-A	ZEAMD 7-11-12 Injury Percent 28 DA-B	GGGAN 5-30-12 Control Percent 14 DAP 13 DA-A	GGGAN 6-13-12 Control Percent 28 DAP 27 DA-A	GGGAN 7-11-12 Control Percent 28 DA-B
1	PREQUEL	45	WG	0.056	lb ai/a	2	oz/a	PRE	A	0 a	0 a	0 a	88 ab	82 ab	78 bc
	BREAKFREE ATZ	5.25	SC	1.97	lb ai/a	1.5	qt/a	PRE	A						
2	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	A	0 a	0 a	0 a	95 a	90 a	86 ab
	BREAKFREE ATZ	5.25	SC	2.63	lb ai/a	2	qt/a	PRE	A						
3	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	A	0 a	0 a	0 a	93 ab	77 abc	75 bc
	CINCH ATZ	5.5	SC	2.75	lb ai/a	2	qt/a	PRE	A						
4	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	A	0 a	0 a	0 a	87 ab	55 d	98 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	28DAP	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B						
	N-PAK AMS	3.4	SL	5.9	% v/v	3	lb ai/a	28DAP	B						
5	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	0 a	0 a	0 a	87 ab	63 cd	65 c
6	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	0 a	0 a	0 a	83 b	75 bc	75 bc
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
7	NONTREATED									0 a	0 a	0 a	0 c	0 e	0 d
8	PREQUEL	45	WG	0.07	lb ai/a	2.5	oz/a	PRE	A	0 a	0 a	0 a	88 ab	85 ab	82 abc
	AATREX	4	SC	2	lb ai/a	2	qt/a	PRE	A						
LSD (P=.05)										0.0	0.0	0.0	10.6	14.7	18.0
Standard Deviation										0.0	0.0	0.0	6.0	8.3	10.2
CV										0.0	0.0	0.0	7.77	12.64	14.58
Replicate F										0.000	0.000	0.000	2.600	0.101	2.363
Replicate Prob(F)										1.0000	1.0000	1.0000	0.1096	0.9042	0.1332
Treatment F										0.000	0.000	0.000	82.282	36.339	25.667
Treatment Prob(F)										1.0000	1.0000	1.0000	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Prequel Evaluation in Corn.

Trial ID: 12-2A-MMW40
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 5-30-12 Control Percent 14 DAP 13 DA-A	AMBTR 6-13-12 Control Percent 28 DAP 27 DA-A	AMBTR 7-11-12 Control Percent 28 DA-B	AMATA 5-30-12 Control Percent 14 DAP 13 DA-A	AMATA 6-13-12 Control Percent 28 DAP 27 DA-A	AMATA 7-11-12 Control Percent 28 DA-B
1	PREQUEL	45	WG	0.056	lb ai/a	2	oz/a	PRE	A	88 a	82 a	80 ab	99 a	99 a	96 ab
	BREAKFREE ATZ	5.25	SC	1.97	lb ai/a	1.5	qt/a	PRE	A						
2	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	A	86 a	66 ab	63 b	99 a	98 a	99 a
	BREAKFREE ATZ	5.25	SC	2.63	lb ai/a	2	qt/a	PRE	A						
3	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	A	87 a	60 ab	67 b	99 a	96 a	93 ab
	CINCH ATZ	5.5	SC	2.75	lb ai/a	2	qt/a	PRE	A						
4	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	A	80 a	60 ab	99 a	99 a	80 b	98 ab
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	28DAP	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B						
	N-PAK AMS	3.4	SL	5.9	% v/v	3	lb ai/a	28DAP	B						
5	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	87 a	53 b	63 b	99 a	90 ab	85 b
6	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	83 a	57 b	57 b	99 a	90 ab	90 ab
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
7	NONTREATED									0 b	0 c	0 c	0 b	0 c	0 c
8	PREQUEL	45	WG	0.07	lb ai/a	2.5	oz/a	PRE	A	90 a	77 ab	66 b	98 a	93 a	91 ab
	AATREX	4	SC	2	lb ai/a	2	qt/a	PRE	A						
LSD (P=.05)										11.6	23.5	28.5	1.4	10.1	13.9
Standard Deviation										6.6	13.3	16.2	0.8	5.7	7.9
CV										8.77	23.45	26.13	0.94	7.09	9.68
Replicate F										8.661	10.997	9.841	1.000	0.946	1.519
Replicate Prob(F)										0.0036	0.0016	0.0025	0.3927	0.4134	0.2553
Treatment F										64.317	10.523	9.194	5492.849	100.855	53.385
Treatment Prob(F)										0.0001	0.0002	0.0004	0.0001	0.0001	0.0001

Prequel Evaluation in Corn.

Trial ID: 12-2A-MMW40
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ABUTH	ABUTH	ABUTH
	Pest Code									ABUTH	ABUTH	ABUTH
	Crop Code											
	Rating Date									5-30-12	6-13-12	7-11-12
	Rating Type									Control	Control	Control
	Rating Unit									Percent	Percent	Percent
	Rating Timing									14 DAP	28 DAP	
	Trt-Eval Interval									13 DA-A	27 DA-A	28 DA-B
1	PREQUEL	45	WG	0.056	lb ai/a	2	oz/a	PRE	A	90 ab	60 ab	60 bc
	BREAKFREE ATZ	5.25	SC	1.97	lb ai/a	1.5	qt/a	PRE	A			
2	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	A	95 a	72 a	65 bc
	BREAKFREE ATZ	5.25	SC	2.63	lb ai/a	2	qt/a	PRE	A			
3	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	A	84 d	55 ab	63 bc
	CINCH ATZ	5.5	SC	2.75	lb ai/a	2	qt/a	PRE	A			
4	PREQUEL	45	WG	0.0467	lb ai/a	1.66	oz/a	PRE	A	85 cd	40 b	99 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A			
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	28DAP	B			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B			
	N-PAK AMS	3.4	SL	5.9	% v/v	3	lb ai/a	28DAP	B			
5	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	85 cd	50 ab	48 c
6	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A	87 bcd	58 ab	70 bc
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A			
7	NONTREATED									0 e	0 c	0 d
8	PREQUEL	45	WG	0.07	lb ai/a	2.5	oz/a	PRE	A	90 abc	75 a	79 ab
	AATREX	4	SC	2	lb ai/a	2	qt/a	PRE	A			
	LSD (P=.05)									5.2	29.4	26.7
	Standard Deviation									3.0	16.7	15.2
	CV									3.86	32.53	25.03
	Replicate F									12.432	4.952	5.778
	Replicate Prob(F)									0.0008	0.0252	0.0160
	Treatment F									332.723	5.980	10.743
	Treatment Prob(F)									0.0001	0.0028	0.0002

Southern Illinois University

Prequel Evaluation in Corn.

Trial ID: 12-2A-MMW40
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: DuPont (USA-12-011).
2. Ratings: CI/WC at 14 and 28 DAP and at 28 DA-B.
3. Rainfall following the PRE application was 0.18 inch 4 days later, 0.28 inch 14 days later and 0.75 inch 25 days later.
4. DAP = Days after planting.
5. Not harvested.

Southern Illinois University

Sequential Programs in Corn with Impact.

Trial ID: 12-2A-M60
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-16-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
To evaluate Impact when used in sequential or total postemergence weed control programs and in tank-mixes with glyphosate compared to competitive programs.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 61-06 **Description:** RR2/LL
BBCH Scale: BCOR **Planting Date:** 5-16-12
Planting Method: SEEDED Seeded **Rate, Unit:** 28000 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** PANDI - Panicum dichotomiflorum Michx.
Common Name: panicum, fall

Pest 2 Type: W **Code:** ABUTH - Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 3 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT
Plot Area, Unit: 280 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 150 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 1.6 **Texture:** SIL SILT LOAM
pH: 5.9 **Soil Name:** PIERRON
CEC: 6

Additional Measured Elements

Element	Quantity	Unit
P1	41	LB/A
K	257	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Sequential Programs in Corn with Impact.

Trial ID: 12-2A-M60
Location: Belleville Res. Center
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-24-12					7	DAY	42.6	74.3	F
2.	4-29-12	3.06	IN	RAIN	rain					
3.	4-30-12	0.66	IN	RAIN	rain					
4.	5-1-12	0.13	IN	RAIN	rain					
5.	5-1-12					7	DAY	33.5	76	F
6.	5-4-12	0.25	IN	RAIN	rain					
7.	5-7-12	0.29	IN	RAIN	rain					
8.	5-8-12					7	DAY	47.5	87.8	F
9.	5-15-12					7	DAY	37.7	81.3	F
10.	5-21-12	0.18	IN	RAIN	rain					
11.	5-22-12					7	DAY	47.6	82.3	F
12.	5-29-12					7	DAY	48.1	90	F
13.	5-30-12	0.07	IN	RAIN	rain					
14.	5-31-12	0.21	IN	RAIN	rain					
15.	6-5-12					7	DAY	50.2	90.1	F
16.	6-11-12	0.75	IN	RAIN	rain					
17.	6-12-12					7	DAY	52.4	93.6	F
18.	6-17-12	0.36	IN	RAIN	rain					
19.	6-19-12					7	DAY	56.3	94	F
20.	6-26-12					7	DAY	51.8	105.4	F
21.	7-3-12					7	DAY	68.9	104.7	F
22.	7-8-12	0.28	IN	RAIN	rain					
23.	7-10-12					7	DAY	63.4	95	F
24.	7-17-12					7	DAY	61	102.2	F
25.	7-24-12					7	DAY	61	103	F
26.	7-29-12	0.15	IN	RAIN	rain					
27.	7-31-12					7	DAY	60.2	99.1	F
28.	8-5-12	0.18	IN	RAIN	rain					
29.	8-7-12					7	DAY	50.2	99.8	F
30.	8-13-12	0.88	IN	RAIN	rain					
31.	8-14-12					7	DAY	51	95.6	F
32.	8-17-12	1.19	IN	RAIN	rain					
33.	8-21-12					7	DAY	54.7	94.2	F
34.	8-26-12	0.04	IN	RAIN	rain					
35.	8-27-12	1.66	IN	RAIN	rain					
36.	8-31-12	0.11	IN	RAIN	rain					

Application Description

	A	B	C
Application Date:	5-17-12	5-29-12	6-4-12
Time of Day:	15:30	16:30	14:00
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	2-4"W-1	2-4"W-2
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	RJW	JRK	JRK
Air Temperature, Unit:	80 F	88 F	88 F
% Relative Humidity:	28	31	48
Wind Velocity, Unit:	6 MPH	1 MPH	4 MPH
Wind Direction:	E	W	NW
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	61 F	68 F	71 F
Soil Moisture:	BELNOR	BELNOR	BELNOR
% Cloud Cover:	30	0	20
Next Rain Occurred On:	5-21-12	5-31-12	6-11-12

Sequential Programs in Corn with Impact.

Trial ID: 12-2A-M60
Location: Belleville Res. Center
Investigator: Bryan Young

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	V3	V5
Stage Minimum, Percent:		V2	V4
Stage Maximum, Percent:		V3	V5
Height, Unit:		6 IN	11 IN
Height Minimum, Maximum:		4 6	6 11

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	PANDI W DESC	PANDI W DESC	PANDI W DESC
Stage Majority, Percent:	NA	2	2
Stage Minimum, Percent:		1	1
Stage Maximum, Percent:		2	2
Height, Unit:		2 IN	1 IN
Height Minimum, Maximum:		1 3	1 2
Density, Unit:		0.3 FT2	0.3 FT2
Pest 2 Code, Type, Scale:	ABUTH W DESC	ABUTH W DESC	ABUTH W DESC
Stage Majority, Percent:	NA	4	4
Stage Minimum, Percent:		Coty	Coty
Stage Maximum, Percent:		6	6
Height, Unit:		2 IN	3 IN
Height Minimum, Maximum:		0.5 3	0.5 4
Density, Unit:		0.01 FT2	0.01 FT2
Pest 3 Code, Type, Scale:	AMATA W DESC	AMATA W DESC	AMATA W DESC
Stage Majority, Percent:	NA	2	4
Stage Minimum, Percent:		Coty	2
Stage Maximum, Percent:		4	6
Height, Unit:		2 IN	2 IN
Height Minimum, Maximum:		0.5 3	1 3
Density, Unit:		0.1 FT2	0.1 FT2

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Sequential Programs in Corn with Impact.

Trial ID: 12-2A-M60
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 10-9-12 Moisture Percent	ZEAMD 10-9-12 Test wt. lb/bu	ZEAMD 10-9-12 Yield bu/A
1	NONTREATED									16.9 a	57.1 a	38 c
2	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	17.6 a	56.8 a	82 b
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C			
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
3	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	17.3 a	56.8 a	85 ab
	IMPACT	2.8	SC	0.0219	lb ai/a	1	fl oz/a	2-4"W-2	C			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C			
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
4	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	17.7 a	56.7 a	93 ab
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C			
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	2-4"W-2	C			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C			
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
5	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	17.2 a	56.9 a	86 ab
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	2-4"W-2	C			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C			
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C			
6	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	17.1 a	57.0 a	89 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	2-4"W-2	C			
7	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	17.3 a	56.9 a	85 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C			
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C			
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	2-4"W-2	C			
8	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	2-4"W-1	B	17.9 a	56.6 a	97 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-1	B			
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-1	B			
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B			
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-1	B			
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	2-4"W-1	B			
9	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B	17.5 a	56.8 a	88 ab
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B			
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	2-4"W-1	B			
LSD (P=.05)										1.23	0.46	14.7
Standard Deviation										0.84	0.31	10.0
CV										4.85	0.55	12.13
Replicate F										0.037	0.334	11.882
Replicate Prob(F)										0.9903	0.8007	0.0001
Treatment F										0.584	0.970	12.147
Treatment Prob(F)										0.7805	0.4830	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Sequential Programs in Corn with Impact.

Trial ID: 12-2A-M60
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 6-5-12 Injury Percent 7 DA-B	ZEAMD 6-11-12 Injury Percent 7 DA-C	ZEAMD 6-13-12 Injury Percent 15 DA-B	ZEAMD 6-19-12 Injury Percent 15 DA-C	ZEAMD 6-28-12 Injury Percent 30 DA-B	ZEAMD 7-4-12 Injury Percent 30 DA-C	ZEAMD 8-3-12 Injury Percent 60 DA-C
1	NONTREATED									0 e	0 d	0 d	0 a	0 a	0 a	0 a
2	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	5 b	5 a	5 a	0 a	0 a	0 a	0 a
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C							
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C							
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C							
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
3	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	4 bc	4 b	4 b	0 a	0 a	0 a	0 a
	IMPACT	2.8	SC	0.0219	lb ai/a	1	fl oz/a	2-4"W-2	C							
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C							
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C							
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
4	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	10 a	3 bc	3 bc	0 a	0 a	0 a	0 a
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C							
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	2-4"W-2	C							
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C							
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C							
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
5	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	4 c	2 c	2 c	0 a	0 a	0 a	0 a
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	2-4"W-2	C							
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C							
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C							
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C							
6	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	0 e	0 d	0 d	0 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	2-4"W-2	C							
7	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	2 d	0 d	0 d	0 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C							
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C							
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C							
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-2	C							
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	2-4"W-2	C							
8	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	2-4"W-1	B	0 e	0 d	0 d	0 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-1	B							
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-1	B							
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B							
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-1	B							
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	2-4"W-1	B							
9	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B	0 e	0 d	0 d	0 a	0 a	0 a	0 a
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B							
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	2-4"W-1	B							
LSD (P=.05)										1.1	0.9	0.9	0.0	0.0	0.0	0.0
Standard Deviation										0.7	0.6	0.6	0.0	0.0	0.0	0.0
CV										27.02	42.43	42.43	0.0	0.0	0.0	0.0
Replicate F										0.342	0.066	0.066	0.000	0.000	0.000	0.000
Replicate Prob(F)										0.7950	0.9773	0.9773	1.0000	1.0000	1.0000	1.0000
Treatment F										83.683	36.053	36.053	0.000	0.000	0.000	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	1.0000	1.0000	1.0000	1.0000

Sequential Programs in Corn with Impact.

Trial ID: 12-2A-M60
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	PANDI 6-11-12 Control Percent 7 DA-C	PANDI 6-19-12 Control Percent 15 DA-C	PANDI 7-4-12 Control Percent 30 DA-C	PANDI 8-3-12 Control Percent 60 DA-C
1	NONTREATED									0 c	0 c	0 c	0 c
2	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	99 a	99 a	98 a	98 a
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C				
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
3	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	99 a	99 a	97 a	97 a
	IMPACT	2.8	SC	0.0219	lb ai/a	1	fl oz/a	2-4"W-2	C				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C				
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
4	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	99 a	99 a	98 a	97 a
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C				
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	2-4"W-2	C				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C				
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
5	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	95 b	70 b	71 b	58 b
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	2-4"W-2	C				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C				
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
6	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	2-4"W-2	C				
7	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	99 a	99 a	98 a	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C				
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C				
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	2-4"W-2	C				
8	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	2-4"W-1	B	99 a	99 a	97 a	96 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-1	B				
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-1	B				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B				
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-1	B				
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	2-4"W-1	B				
9	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B	99 a	99 a	98 a	97 a
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B				
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	2-4"W-1	B				
LSD (P=.05)										1.7	3.6	5.2	7.7
Standard Deviation										1.1	2.4	3.5	5.3
CV										1.3	2.88	4.2	6.42
Replicate F										1.572	1.085	1.428	1.575
Replicate Prob(F)										0.2232	0.3754	0.2604	0.2225
Treatment F										3342.742	739.941	343.532	161.603
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

Sequential Programs in Corn with Impact.

Trial ID: 12-2A-M60
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ABUTH 6-11-12 Control Percent 7 DA-C	ABUTH 6-19-12 Control Percent 15 DA-C	ABUTH 7-4-12 Control Percent 30 DA-C	ABUTH 8-3-12 Control Percent 60 DA-C
1	NONTREATED									0 c	0 b	0 c	0 c
2	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	99 a	99 a	98 a	96 ab
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C				
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
3	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	99 a	99 a	98 a	95 ab
	IMPACT	2.8	SC	0.0219	lb ai/a	1	fl oz/a	2-4"W-2	C				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C				
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
4	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	99 a	99 a	99 a	99 a
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C				
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	2-4"W-2	C				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C				
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
5	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	99 a	99 a	99 a	99 a
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	2-4"W-2	C				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C				
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
6	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	99 a	99 a	98 a	92 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	2-4"W-2	C				
7	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	99 a	99 a	98 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C				
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C				
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	2-4"W-2	C				
8	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	2-4"W-1	B	99 b	99 a	94 b	87 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-1	B				
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-1	B				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B				
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-1	B				
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	2-4"W-1	B				
9	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B	99 a	99 a	99 a	99 a
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B				
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	2-4"W-1	B				
LSD (P=.05)										0.5	0.0	2.6	8.7
Standard Deviation										0.3	0.0	1.8	5.9
CV										0.39	0.0	2.07	6.99
Replicate F										0.958	0.000	3.149	3.194
Replicate Prob(F)										0.4291	1.0000	0.0444	0.0425
Treatment F										37524.023	0.000	1310.944	117.050
Treatment Prob(F)										0.0001	1.0000	0.0001	0.0001

Sequential Programs in Corn with Impact.

Trial ID: 12-2A-M60
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 6-11-12 Control Percent 7 DA-C	AMATA 6-19-12 Control Percent 15 DA-C	AMATA 7-4-12 Control Percent 30 DA-C	AMATA 8-3-12 Control Percent 60 DA-C
1	NONTREATED									0 b	0 b	0 b	0 c
2	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	99 a	99 a	99 a	99 a
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C				
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
3	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	99 a	99 a	99 a	99 a
	IMPACT	2.8	SC	0.0219	lb ai/a	1	fl oz/a	2-4"W-2	C				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C				
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
4	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	99 a	99 a	99 a	99 b
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C				
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	2-4"W-2	C				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C				
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
5	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	99 a	99 a	99 a	99 a
	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	2-4"W-2	C				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	2-4"W-2	C				
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	2-4"W-2	C				
6	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	2-4"W-2	C				
7	DEGREE XTRA	4.04	CS	2.02	lb ai/a	4	pt/a	PRE	A	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-2	C				
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-2	C				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-2	C				
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	2-4"W-2	C				
8	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	2-4"W-1	B	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"W-1	B				
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	2-4"W-1	B				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B				
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	2-4"W-1	B				
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	2-4"W-1	B				
9	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	2-4"W-1	B	99 a	99 a	99 a	99 a
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	2-4"W-1	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W-1	B				
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	2-4"W-1	B				
LSD (P=.05)										0.0	0.0	0.0	0.5
Standard Deviation										0.0	0.0	0.0	0.3
CV										0.0	0.0	0.0	0.39
Replicate F										0.000	0.000	0.000	0.958
Replicate Prob(F)										1.0000	1.0000	1.0000	0.4291
Treatment F										0.000	0.000	0.000	37524.023
Treatment Prob(F)										1.0000	1.0000	1.0000	0.0001

Southern Illinois University

Sequential Programs in Corn with Impact.

Trial ID: 12-2A-M60
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: AMVAC (12C04H086).
2. CI at 7, 15, and 30 DA-B and DA-C; WC at 7, 15, 30, and 60 DA-C.
3. Yield.
4. Application B and C should be around V2-V3 and V3-V4 corn, respectively.
5. Rainfall following the PRE application was 0.18 inch 4 days later and 0.28 inch 14 days later.
6. Missing data for plot 201 was due to spraying error.
7. Harvested 10-9-12, (2) 30 inch rows by 25 ft.

Instigate Evaluation in Corn.

Trial ID: 12-2A-ME50
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-16-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate the performance of Instigate weed control programs in corn.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 61-06 **Description:** RR2/LL
BBCH Scale: BCOR **Planting Date:** 5-16-12
Planting Method: SEEDED Seeded **Rate, Unit:** 28000 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** SETFA - Setaria faberi Herrm.
Common Name: foxtail, giant

Pest 2 Type: W **Code:** XANST - Xanthium strumarium L.
Common Name: cocklebur, common

Pest 3 Type: W **Code:** AMBEL - Ambrosia artemisiifolia L.
Common Name: ragweed, common

Pest 4 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT
Plot Area, Unit: 280 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 150 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 1.6 **Texture:** SIL SILT LOAM
pH: 5.9 **Soil Name:** PIERRON
CEC: 6

Additional Measured Elements

Element	Quantity	Unit
P1	41	LB/A
K	257	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Instigate Evaluation in Corn.

Trial ID: 12-2A-ME50
Location: Belleville Res. Center
Investigator: Bryan Young

Application Description

	A	B
Application Date:	5-17-12	6-13-12
Time of Day:	17:30	9:45
Application Method:	Spray	Spray
Application Timing:	PRE	28DAP
Application Placement:	BROFOL	BROFOL
Applied By:	LAH	JRK
Air Temperature, Unit:	80 F	73 F
% Relative Humidity:	28	41
Wind Velocity, Unit:	6 MPH	4 MPH
Wind Direction:	E	E
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	61 F	72 F
Soil Moisture:	BELNOR	NORMAL
% Cloud Cover:	30	15
Next Rain Occurred On:	5-20-12	6-16-12

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	ZEAMD BCOR
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	V6
Stage Minimum, Percent:		V5
Stage Maximum, Percent:		V6
Height, Unit:		22 IN
Height Minimum, Maximum:		17 22

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	SETFA W DESC	SETFA W DESC
Stage Majority, Percent:	NA	6
Stage Minimum, Percent:		1
Stage Maximum, Percent:		10
Height, Unit:		4 IN
Height Minimum, Maximum:		1 6
Density, Unit:		1 FT2
Pest 2 Code, Type, Scale:	XANST W DESC	XANST W DESC
Stage Majority, Percent:	NA	6
Stage Minimum, Percent:		2
Stage Maximum, Percent:		12
Height, Unit:		4 IN
Height Minimum, Maximum:		1 5
Density, Unit:		0.1 FT2
Pest 3 Code, Type, Scale:	AMBEL W DESC	AMBEL W DESC
Stage Majority, Percent:	NA	4
Stage Minimum, Percent:		2
Stage Maximum, Percent:		10
Height, Unit:		3 IN
Height Minimum, Maximum:		1 6
Density, Unit:		0.3 FT2
Pest 4 Code, Type, Scale:	AMATA W DESC	AMATA W DESC
Stage Majority, Percent:	NA	6
Stage Minimum, Percent:		2
Stage Maximum, Percent:		10
Height, Unit:		4 IN
Height Minimum, Maximum:		1 7
Density, Unit:		0.1 FT2

Instigate Evaluation in Corn.

Trial ID: 12-2A-ME50
Location: Belleville Res. Center
Investigator: Bryan Young

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA

Instigate Evaluation in Corn.

Trial ID: 12-2A-ME50
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 5-30-12 Injury Percent 14 DAP 13 DA-A	ZEAMD 6-13-12 Injury Percent 28 DAP 0 DA-B	ZEAMD 6-20-12 Injury Percent 7 DA-B	ZEAMD 7-11-12 Injury Percent 28 DA-B	SETFA 5-30-12 Control Percent 14 DAP 13 DA-A	SETFA 6-13-12 Control Percent 28 DAP 0 DA-B	SETFA 7-11-12 Control Percent 28 DA-B
1	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	0 b	0 a	83 bc	70 abc	98 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A							
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B							
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B							
2	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	8 a	0 a	83 bc	82 abc	99 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A							
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	28DAP	B							
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B							
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B							
3	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	0 b	0 a	77 cd	70 abc	98 a
	CINCH ATZ	5.5	SC	1.38	lb ai/a	2	pt/a	PRE	A							
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B							
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B							
4	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	0 b	0 a	94 a	89 a	62 b
	CINCH ATZ	5.5	SC	2.06	lb ai/a	3	pt/a	PRE	A							
5	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	0 b	0 a	96 a	96 a	75 b
	CINCH ATZ	5.5	SC	2.75	lb ai/a	4	pt/a	PRE	A							
6	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	9 a	0 a	83 bc	85 ab	99 a
	CINCH	7.64	SC	1.91	lb ai/a	2	pt/a	PRE	A							
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	28DAP	B							
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B							
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B							
7	LUMAX	3.95	SE	2.96	lb ai/a	3	qt/a	PRE	A	0 a	0 a	0 b	0 a	92 ab	94 a	99 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B							
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B							
8	NONTREATED									0 a	0 a	0 b	0 a	0 e	0 d	0 c
9	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	0 b	0 a	72 d	53 c	99 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A							
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B							
	AATREX	4	SC	1	lb ai/a	1	qt/a	28DAP	B							
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B							
10	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	0 a	0 a	0 b	0 a	73 cd	57 bc	99 a
	CINCH ATZ	5.5	SC	1.38	lb ai/a	2	pt/a	PRE	A							
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B							
	AATREX	4	SC	1	lb ai/a	1	qt/a	28DAP	B							
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B							
LSD (P=.05)										0.0	0.0	1.4	0.0	10.5	30.6	20.2
Standard Deviation										0.0	0.0	0.8	0.0	6.1	17.8	11.8
CV										0.0	0.0	48.03	0.0	8.15	25.62	14.22
Replicate F										0.000	0.000	0.000	0.000	5.521	0.968	0.274
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000	0.0135	0.3986	0.7632
Treatment F										0.000	0.000	58.050	0.000	61.360	7.681	22.015
Treatment Prob(F)										1.0000	1.0000	0.0001	1.0000	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Instigate Evaluation in Corn.

Trial ID: 12-2A-ME50
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	XANST 5-30-12 Control Percent 14 DAP 13 DA-A	XANST 6-13-12 Control Percent 28 DAP 0 DA-B	XANST 7-11-12 Control Percent 28 DA-B	AMBEL 5-30-12 Control Percent 14 DAP 13 DA-A	AMBEL 6-13-12 Control Percent 28 DAP 0 DA-B	AMBEL 7-11-12 Control Percent 28 DA-B
1	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	77 a-d	72 a	99 a	95 a	95 a	99 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B						
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B						
2	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	63 bcd	67 a	99 a	95 a	93 a	99 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	28DAP	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B						
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B						
3	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	67 a-d	58 a	99 a	95 a	95 a	99 a
	CINCH ATZ	5.5	SC	1.38	lb ai/a	2	pt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B						
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B						
4	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	82 ab	83 a	60 b	91 a	91 a	60 c
	CINCH ATZ	5.5	SC	2.06	lb ai/a	3	pt/a	PRE	A						
5	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	87 a	86 a	65 b	98 a	96 a	83 b
	CINCH ATZ	5.5	SC	2.75	lb ai/a	4	pt/a	PRE	A						
6	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	80 abc	80 a	99 a	63 b	71 b	98 a
	CINCH	7.64	SC	1.91	lb ai/a	2	pt/a	PRE	A						
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	28DAP	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B						
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B						
7	LUMAX	3.95	SE	2.96	lb ai/a	3	qt/a	PRE	A	84 ab	86 a	99 a	96 a	97 a	99 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B						
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B						
8	NONTREATED									0 e	0 b	0 c	0 c	0 c	0 d
9	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	58 cd	63 a	99 a	96 a	95 a	99 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B						
	AATREX	4	SC	1	lb ai/a	1	qt/a	28DAP	B						
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B						
10	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	57 d	67 a	99 a	87 a	85 ab	99 a
	CINCH ATZ	5.5	SC	1.38	lb ai/a	2	pt/a	PRE	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B						
	AATREX	4	SC	1	lb ai/a	1	qt/a	28DAP	B						
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B						
LSD (P=.05)										23.3	35.5	13.7	13.7	13.8	13.7
Standard Deviation										13.6	20.7	8.0	8.0	8.1	8.0
CV										20.74	31.34	9.75	9.8	9.86	9.57
Replicate F										1.357	0.006	1.218	2.240	5.347	1.858
Replicate Prob(F)										0.2826	0.9939	0.3190	0.1353	0.0150	0.1847
Treatment F										10.561	4.443	49.884	43.436	40.815	47.953
Treatment Prob(F)										0.0001	0.0035	0.0001	0.0001	0.0001	0.0001

Instigate Evaluation in Corn.

Trial ID: 12-2A-ME50
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 5-30-12 Control Percent 14 DAP 13 DA-A	AMATA 6-13-12 Control Percent 28 DAP 0 DA-B	AMATA 7-11-12 Control Percent 28 DA-B
1	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	96 a	99 a	99 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B			
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B			
2	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	96 a	96 a	99 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A			
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	28DAP	B			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B			
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B			
3	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	96 a	96 a	99 a
	CINCH ATZ	5.5	SC	1.38	lb ai/a	2	pt/a	PRE	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B			
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B			
4	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	98 a	98 a	90 b
	CINCH ATZ	5.5	SC	2.06	lb ai/a	3	pt/a	PRE	A			
5	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	99 a	99 a	96 a
	CINCH ATZ	5.5	SC	2.75	lb ai/a	4	pt/a	PRE	A			
6	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	96 a	96 a	99 a
	CINCH	7.64	SC	1.91	lb ai/a	2	pt/a	PRE	A			
	REALM Q	38.75	WG	0.097	lb ai/a	4	oz/a	28DAP	B			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B			
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B			
7	LUMAX	3.95	SE	2.96	lb ai/a	3	qt/a	PRE	A	99 a	99 a	99 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B			
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B			
8	NONTREATED									0 b	0 b	0 c
9	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	98 a	96 a	99 a
	AATREX	4	SC	1	lb ai/a	1	qt/a	PRE	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B			
	AATREX	4	SC	1	lb ai/a	1	qt/a	28DAP	B			
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B			
10	INSTIGATE	45.84	WG	0.172	lb ai/a	6	oz/a	PRE	A	97 a	98 a	99 a
	CINCH ATZ	5.5	SC	1.38	lb ai/a	2	pt/a	PRE	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	B			
	AATREX	4	SC	1	lb ai/a	1	qt/a	28DAP	B			
	N-PAK AMS	3.4	SL	2	lb ai/a	3.92	% v/v	28DAP	B			
LSD (P=.05)										4.6	4.5	5.6
Standard Deviation										2.7	2.6	3.3
CV										3.09	3.02	3.73
Replicate F										1.320	1.773	1.898
Replicate Prob(F)										0.2919	0.1982	0.1787
Treatment F										389.600	408.045	268.037
Treatment Prob(F)										0.0001	0.0001	0.0001

Southern Illinois University

Instigate Evaluation in Corn.

Trial ID: 12-2A-ME50
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: DuPont (USA-12-004).
2. Ratings: CI at 7 DA-B; CI/WC at 14 and 28 DAP and at 28 DA-B.
3. Rainfall following the PRE application was 0.1 inch 3 days later and 0.3 inch 13 days later.
4. Not harvested.

Southern Illinois University

Anthem Preemergence and Postemergence in Corn - Site 2.

Trial ID: 12-T4-S120
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-16-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate residual control of waterhemp from Anthem
compared with competitive standards in corn.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 61-06 **Description:** RR2/LL
BBCH Scale: BCOR **Planting Date:** 5-16-12
Planting Method: SEEDED Seeded **Rate, Unit:** 28000 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** SETFA - Setaria faberi Herrm.
Common Name: foxtail, giant

Pest 2 Type: W **Code:** IPOHE - Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Pest 3 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 27 FT
Plot Area, Unit: 270 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 150 LB/A, P2O5 50 LB/A, K2O 100 LB/A

Soil Description

% OM: 1.9 **Texture:** SIL SILT LOAM
pH: 6.3 **Soil Name:** BETHALTO
CEC: 12

Additional Measured Elements

Element	Quantity	Unit
P1	50	LB/A
K	374	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Anthem Preemergence and Postemergence in Corn - Site 2.

Trial ID: 12-T4-S120
Location: Belleville Res. Center
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-24-12					7	DAY	42.6	74.3	F
2.	4-29-12	3.06	IN	RAIN	rain					
3.	4-30-12	0.66	IN	RAIN	rain					
4.	5-1-12	0.13	IN	RAIN	rain					
5.	5-1-12					7	DAY	33.5	76	F
6.	5-4-12	0.25	IN	RAIN	rain					
7.	5-7-12	0.29	IN	RAIN	rain					
8.	5-8-12					7	DAY	47.5	87.8	F
9.	5-15-12					7	DAY	37.7	81.3	F
10.	5-21-12	0.18	IN	RAIN	rain					
11.	5-22-12					7	DAY	47.6	82.3	F
12.	5-29-12					7	DAY	48.1	90	F
13.	5-30-12	0.07	IN	RAIN	rain					
14.	5-31-12	0.21	IN	RAIN	rain					
15.	6-5-12					7	DAY	50.2	90.1	F
16.	6-11-12	0.75	IN	RAIN	rain					
17.	6-12-12					7	DAY	52.4	93.6	F
18.	6-17-12	0.36	IN	RAIN	rain					
19.	6-19-12					7	DAY	56.3	94	F
20.	6-26-12					7	DAY	51.8	105.4	F
21.	7-3-12					7	DAY	68.9	104.7	F
22.	7-8-12	0.28	IN	RAIN	rain					
23.	7-10-12					7	DAY	63.4	95	F
24.	7-17-12					7	DAY	61	102.2	F
25.	7-24-12					7	DAY	61	103	F
26.	7-29-12	0.15	IN	RAIN	rain					
27.	7-31-12					7	DAY	60.2	99.1	F
28.	8-5-12	0.18	IN	RAIN	rain					
29.	8-7-12					7	DAY	50.2	99.8	F
30.	8-13-12	0.88	IN	RAIN	rain					
31.	8-14-12					7	DAY	51	95.6	F
32.	8-17-12	1.19	IN	RAIN	rain					
33.	8-21-12					7	DAY	54.7	94.2	F
34.	8-26-12	0.04	IN	RAIN	rain					
35.	8-27-12	1.66	IN	RAIN	rain					
36.	8-31-12	0.11	IN	RAIN	rain					

Application Description

	A	B	C
Application Date:	5-17-12	5-29-12	6-15-12
Time of Day:	17:30	15:15	10:00
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	V2-V3	POST
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	RJW	JRK	TAR
Air Temperature, Unit:	79 F	87 F	82 F
% Relative Humidity:	28	39	56
Wind Velocity, Unit:	6 MPH	2 MPH	3 MPH
Wind Direction:	E	S	N
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	61 F	68 F	75 F
Soil Moisture:	BELNOR	BELNOR	NORMAL
% Cloud Cover:	10	0	50
Next Rain Occurred On:	5-21-12	6-11-12	6-17-12

Anthem Preemergence and Postemergence in Corn - Site 2.

Trial ID: 12-T4-S120
Location: Belleville Res. Center
Investigator: Bryan Young

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	V3	V6
Stage Minimum, Percent:		V2	V6
Stage Maximum, Percent:		V3	V6
Height, Unit:		6 IN	20 IN
Height Minimum, Maximum:		4 6	18 20

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	SETFA W DESC	SETFA W DESC	SETFA W DESC
Stage Majority, Percent:	NA	NA	6
Stage Minimum, Percent:			5
Stage Maximum, Percent:			6
Height, Unit:			3 IN
Height Minimum, Maximum:			2 5
Density, Unit:			0.001 FT2
Pest 2 Code, Type, Scale:	IPOHE W DESC	IPOHE W DESC	IPOHE W DESC
Stage Majority, Percent:	NA	NA	4
Stage Minimum, Percent:			2
Stage Maximum, Percent:			10+
Height, Unit:			3 IN
Height Minimum, Maximum:			2 4
Density, Unit:			0.1 FT2
Pest 3 Code, Type, Scale:	AMATA W DESC	AMATA W DESC	AMATA W DESC
Stage Majority, Percent:	NA	NA	5
Stage Minimum, Percent:			2
Stage Maximum, Percent:			7
Height, Unit:			2 IN
Height Minimum, Maximum:			0.5 4
Density, Unit:			0.01 FT2

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Anthem Preemergence and Postemergence in Corn - Site 2.

Trial ID: 12-T4-S120
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 10-9-12 Moisture Percent	ZEAMD 10-9-12 Test wt. lb/bu	ZEAMD 10-9-12 Yield bu/A
	Pest Code											
	Crop Code											
	Rating Date											
	Rating Type											
	Rating Unit											
	Rating Timing											
	Trt-Eval Interval											
1	ANTHEM	2.15	SE	0.168	lb ai/a	10	fl oz/a	PRE	A	17.9 a	56.6 a	152 abc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	C			
2	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	18.2 a	56.5 a	157 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	C			
3	ANTHEM	2.15	SE	0.168	lb ai/a	10	fl oz/a	PRE	A	18.3 a	56.4 a	143 c-f
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C			
4	HARNESS	7	EC	2.36	lb ai/a	2.7	pt/a	PRE	A	18.5 a	56.4 a	136 f
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C			
5	DUAL II MAGNUM	7.64	EC	1.6	lb ai/a	1.67	pt/a	PRE	A	18.1 a	56.5 a	138 def
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C			
6	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	18.1 a	56.5 a	137 ef
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C			
7	BICEP LITE II MAGNUM	6	SC	2.25	lb ai/a	1.5	qt/a	PRE	A	18.1 a	56.5 a	135 f
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C			
8	HARNESS XTRA	6	EC	3.45	lb ai/a	2.3	qt/a	PRE	A	17.8 a	56.7 a	146 b-f
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C			
9	ZEMAX	3.67	SC	2.2	lb ai/a	2.4	qt/a	PRE	A	17.6 a	56.8 a	135 f
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C			
10	VERDICT	5.57	EC	0.696	lb ai/a	16	fl oz/a	PRE	A	17.9 a	56.6 a	144 b-f
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C			
11	ANTHEM	2.15	SE	0.151	lb ai/a	9	fl oz/a	V2-V3	B	18.0 a	56.6 a	148 a-f
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B			
12	ANTHEM ATZ	4.5	SE	0.98	lb ai/a	28	fl oz/a	V2-V3	B	18.1 a	56.5 a	150 a-e
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B			
13	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	V2-V3	B	18.3 a	56.5 a	160 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2-V3	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B			
14	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V2-V3	B	18.1 a	56.5 a	148 a-f
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B			
15	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B	18.4 a	56.4 a	150 a-e
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B			

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Anthem Preemergence and Postemergence in Corn - Site 2.

Trial ID: 12-T4-S120
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 10-9-12 Moisture Percent	ZEAMD 10-9-12 Test wt. lb/bu	ZEAMD 10-9-12 Yield bu/A
16	ANTHEM	2.15	SE	0.151	lb ai/a	9	fl oz/a	V2-V3	B	18.8 a	56.2 a	151 a-d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B			
	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	V2-V3	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B			
LSD (P=.05)										0.73	0.31	13.7
Standard Deviation										0.51	0.22	9.6
CV										2.81	0.39	6.57
Replicate F										0.939	0.761	4.399
Replicate Prob(F)										0.4298	0.5221	0.0085
Treatment F										1.188	1.314	2.689
Treatment Prob(F)										0.3151	0.2341	0.0053

Anthem Preemergence and Postemergence in Corn - Site 2.

Trial ID: 12-T4-S120
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 6-5-12 Injury Percent 14 DAE 19 DA-A	ZEAMD 6-12-12 Injury Percent 14 DA-B	ZEAMD 6-21-12 Injury Percent 30 DAE 18 DA-B	ZEAMD 6-28-12 Injury Percent 30 DA-B 13 DA-C
1	ANTHEM	2.15	SE	0.168	lb ai/a	10	fl oz/a	PRE	A	0 d	0 c	0 c	0 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	C				
2	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	0 d	0 c	0 c	0 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	C				
3	ANTHEM	2.15	SE	0.168	lb ai/a	10	fl oz/a	PRE	A	0 d	0 c	8 a	1 cd
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C				
4	HARNESS	7	EC	2.36	lb ai/a	2.7	pt/a	PRE	A	0 d	0 c	10 a	0 d
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C				
5	DUAL II MAGNUM	7.64	EC	1.6	lb ai/a	1.67	pt/a	PRE	A	0 d	0 c	8 a	2 bcd
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C				
6	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	0 d	0 c	8 a	0 d
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C				
7	BICEP LITE II MAGNUM	6	SC	2.25	lb ai/a	1.5	qt/a	PRE	A	0 d	0 c	10 a	5 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C				
8	HARNESS XTRA	6	EC	3.45	lb ai/a	2.3	qt/a	PRE	A	0 d	0 c	8 a	0 d
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C				
9	ZEMAX	3.67	SC	2.2	lb ai/a	2.4	qt/a	PRE	A	0 d	0 c	8 a	3 abc
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C				
10	VERDICT	5.57	EC	0.696	lb ai/a	16	fl oz/a	PRE	A	0 d	0 c	10 a	4 ab
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C				
11	ANTHEM	2.15	SE	0.151	lb ai/a	9	fl oz/a	V2-V3	B	5 b	2 b	1 bc	0 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B				
12	ANTHEM ATZ	4.5	SE	0.98	lb ai/a	28	fl oz/a	V2-V3	B	3 c	1 bc	0 c	0 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B				
13	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	V2-V3	B	0 d	0 c	0 c	0 d
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2-V3	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B				
14	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V2-V3	B	0 d	0 c	0 c	0 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B				
15	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B	0 d	0 c	0 c	0 d
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B				

Anthem Preemergence and Postemergence in Corn - Site 2.

Trial ID: 12-T4-S120
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 6-5-12 Injury Percent 14 DAE 19 DA-A	ZEAMD 6-12-12 Injury Percent 14 DA-B	ZEAMD 6-21-12 Injury Percent 30 DAE 18 DA-B	ZEAMD 6-28-12 Injury Percent 30 DA-B 13 DA-C
	Pest Code												
	Crop Code												
	Rating Date												
	Rating Type												
	Rating Unit												
	Rating Timing												
	Trt-Eval Interval												
16	ANTHEM	2.15	SE	0.151	lb ai/a	9	fl oz/a	V2-V3	B	6 a	3 a	3 b	0 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B				
	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	V2-V3	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B				
	LSD (P=.05)									0.5	0.8	2.5	2.3
	Standard Deviation									0.3	0.6	1.8	1.6
	CV									43.03	171.22	38.5	166.41
	Replicate F									1.364	1.634	4.388	3.716
	Replicate Prob(F)									0.2660	0.1949	0.0086	0.0180
	Treatment F									106.773	8.525	24.632	4.230
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

Anthem Preemergence and Postemergence in Corn - Site 2.

Trial ID: 12-T4-S120
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	SETFA 6-16-12 Control Percent 30 DA-A 18 DA-B	SETFA 7-16-12 Control Percent 60 DA-A 31 DA-C	SETFA 8-15-12 Control Percent 90 DA-A 61 DA-C	IPOHE 6-16-12 Control Percent 30 DA-A 18 DA-B	IPOHE 7-16-12 Control Percent 60 DA-A 31 DA-C	IPOHE 8-15-12 Control Percent 90 DA-A 61 DA-C
1	ANTHEM	2.15	SE	0.168	lb ai/a	10	fl oz/a	PRE	A	75 bc	97 abc	97 a	30 fg	94 ab	92 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	C						
2	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	54 cd	98 a	97 a	53 def	97 a	96 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	C						
3	ANTHEM	2.15	SE	0.168	lb ai/a	10	fl oz/a	PRE	A	60 bcd	94 a-d	94 a	36 efg	91 abc	91 ab
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C						
4	HARNESS	7	EC	2.36	lb ai/a	2.7	pt/a	PRE	A	50 d	87 de	90 a	30 fg	93 abc	90 ab
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C						
5	DUAL II MAGNUM	7.64	EC	1.6	lb ai/a	1.67	pt/a	PRE	A	63 bcd	93 a-d	90 a	68 a-d	89 bcd	88 b
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C						
6	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	67 bcd	89 cd	88 a	50 d-g	89 bcd	86 bc
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C						
7	BICEP LITE II MAGNUM	6	SC	2.25	lb ai/a	1.5	qt/a	PRE	A	73 bcd	89 cd	88 a	25 g	90 bc	90 ab
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C						
8	HARNESS XTRA	6	EC	3.45	lb ai/a	2.3	qt/a	PRE	A	80 ab	93 a-d	93 a	43 d-g	90 bc	89 ab
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C						
9	ZEMAX	3.67	SC	2.2	lb ai/a	2.4	qt/a	PRE	A	60 bcd	90 bcd	91 a	60 cde	90 bc	87 b
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C						
10	VERDICT	5.57	EC	0.696	lb ai/a	16	fl oz/a	PRE	A	67 bcd	91 a-d	90 a	63 b-e	91 abc	90 ab
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C						
11	ANTHEM	2.15	SE	0.151	lb ai/a	9	fl oz/a	V2-V3	B	99 a	94 a-d	96 a	91 a	81 e	78 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B						
12	ANTHEM ATZ	4.5	SE	0.98	lb ai/a	28	fl oz/a	V2-V3	B	99 a	92 a-d	91 a	90 ab	83 de	76 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B						
13	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	V2-V3	B	99 a	97 ab	97 a	90 ab	86 cde	80 cd
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2-V3	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B						
14	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V2-V3	B	99 a	75 f	68 b	91 a	70 f	61 e
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B						
15	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B	99 a	80 ef	74 b	91 a	73 f	64 e
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B						

Anthem Preemergence and Postemergence in Corn - Site 2.

Trial ID: 12-T4-S120
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	SETFA 6-16-12 Control Percent 30 DA-A 18 DA-B	SETFA 7-16-12 Control Percent 60 DA-A 31 DA-C	SETFA 8-15-12 Control Percent 90 DA-A 61 DA-C	IPOHE 6-16-12 Control Percent 30 DA-A 18 DA-B	IPOHE 7-16-12 Control Percent 60 DA-A 31 DA-C	IPOHE 8-15-12 Control Percent 90 DA-A 61 DA-C
16	ANTHEM	2.15	SE	0.151	lb ai/a	9	fl oz/a	V2-V3	B	99 a	94 a-d	96 a	88 abc	89 bcd	87 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B						
	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	V2-V3	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B						
LSD (P=.05)										22.7	7.9	9.9	27.7	6.3	6.9
Standard Deviation										15.9	5.6	6.9	19.4	4.4	4.8
CV										20.48	6.13	7.69	31.07	5.03	5.73
Replicate F										2.085	1.409	1.520	1.474	2.814	6.285
Replicate Prob(F)										0.1159	0.2526	0.2221	0.2346	0.0499	0.0012
Treatment F										5.463	4.763	5.612	6.738	10.969	16.748
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Anthem Preemergence and Postemergence in Corn - Site 2.

Trial ID: 12-T4-S120
Location: Belleville Res. Center
Investigator: Bryan Young

Pest Code								AMATA	AMATA	AMATA
Crop Code										
Rating Date								6-16-12	7-16-12	8-15-12
Rating Type								Control	Control	Control
Rating Unit								Percent	Percent	Percent
Rating Timing								30 DA-A	60 DA-A	90 DA-A
Trt-Eval Interval								18 DA-B	31 DA-C	61 DA-C
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
1	ANTHEM	2.15	SE	0.168	lb ai/a	10	fl oz/a	PRE	A	92 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	C			
2	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	91 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	C			
3	ANTHEM	2.15	SE	0.168	lb ai/a	10	fl oz/a	PRE	A	99 a	98 a	99 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C			
4	HARNESS	7	EC	2.36	lb ai/a	2.7	pt/a	PRE	A	99 a	99 a	94 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C			
5	DUAL II MAGNUM	7.64	EC	1.6	lb ai/a	1.67	pt/a	PRE	A	87 a	97 a	95 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C			
6	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	87 a	94 b	92 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C			
7	BICEP LITE II MAGNUM	6	SC	2.25	lb ai/a	1.5	qt/a	PRE	A	97 a	99 a	98 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C			
8	HARNESS XTRA	6	EC	3.45	lb ai/a	2.3	qt/a	PRE	A	87 a	99 a	97 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C			
9	ZEMAX	3.67	SC	2.2	lb ai/a	2.4	qt/a	PRE	A	99 a	99 a	96 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C			
10	VERDICT	5.57	EC	0.696	lb ai/a	16	fl oz/a	PRE	A	97 a	99 a	98 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C			
11	ANTHEM	2.15	SE	0.151	lb ai/a	9	fl oz/a	V2-V3	B	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B			
12	ANTHEM ATZ	4.5	SE	0.98	lb ai/a	28	fl oz/a	V2-V3	B	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B			
13	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	V2-V3	B	99 a	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2-V3	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B			
14	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V2-V3	B	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B			
15	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B	99 a	97 a	88 a
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B			

Anthem Preemergence and Postemergence in Corn - Site 2.

Trial ID: 12-T4-S120
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 6-16-12 Control Percent 30 DA-A 18 DA-B	AMATA 7-16-12 Control Percent 60 DA-A 31 DA-C	AMATA 8-15-12 Control Percent 90 DA-A 61 DA-C
16	ANTHEM	2.15	SE	0.151	lb ai/a	9	fl oz/a	V2-V3	B	99 a	99 a	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B			
	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	V2-V3	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B			
LSD (P=.05)										17.4	2.9	7.0
Standard Deviation										12.2	2.0	4.9
CV										12.77	2.06	5.1
Replicate F										0.125	0.540	0.347
Replicate Prob(F)										0.9449	0.6571	0.7918
Treatment F										0.682	2.207	1.598
Treatment Prob(F)										0.7882	0.0208	0.1128

Southern Illinois University

Anthem Preemergence and Postemergence in Corn - Site 2.

Trial ID: 12-T4-S120
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: FMC.
2. Ratings: CI at 14 and 30 DAE, 14 and 30 DA-B. 30 DA-B rating should include all plots.
   WC at 30, 60, and 90 DA-A, WC 30 DA-A is before POST application C.
   WC 60-80 DA-C.
3. POST application C timing is 30 DA-A.
4. Yield.
5. On 5-29-12 at the V2-V3 application timing, there were no weeds emerged due to dry soil.
   On 6-16-12 at 30 DA-A weeds were light and variable.
   On 8-15-12 at 61 DA-C decreasing weed control was due to new emergence.
6. Rainfall following the PRE application was 0.18 inch 4 days later and 0.28 inch 14 days later.
7. Harvested 10-9-12, (2) 30 inch rows by 24 ft.

Soybean, Tilled Weed Control Studies

Southern Illinois University

General Soybean Herbicide Program Comparison.

Trial ID: 12-TIC-S90
Location: Tree Improvement Ctr.
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 7-18-12

Trial Location

City: Carbondale
State/Prov.: IL
Postal Code: 62901
Country: USA

Objectives:
Compare the efficacy of various soybean herbicide programs that include standard commercial programs and recent herbicide products.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 7-18-12
Planting Method: SEEDED Seeded **Rate, Unit:** 75 LB/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMARE - Amaranthus retroflexus L.
Common Name: pigweed, redroot

Pest 2 Type: W **Code:** GGGAN
Common Name: grasses, annual
Description: Mixture of SETFA and DIGSA

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% Sand: 7.79 **% OM:** 2.54 **Texture:** SIL SILT LOAM
% Silt: 75.9 **pH:** 6.3 **Soil Name:** HOSMER
% Clay: 16.31 **CEC:** 12.37

Additional Measured Elements

Element	Quantity	Unit
P1	82	LB/A
K	300	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: NORMAL normal
Closest Weather Station: ICN - Carbondale IL **Distance, Unit:** 1.5 MI

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	6-4-12	0.16	IN	RAIN	rain					
2.	6-5-12					7	DAY	48.5	88.8	F

General Soybean Herbicide Program Comparison.

Trial ID: 12-TIC-S90
Location: Tree Improvement Ctr.
Investigator: Bryan Young

3.	6-11-12	0.62	IN	RAIN	rain					
4.	6-12-12					7	DAY	49.8	91.1	F
5.	6-17-12	0.06	IN	RAIN	rain					
6.	6-19-12					7	DAY	55.4	96.4	F
7.	6-26-12					7	DAY	51.1	105.4	F
8.	7-3-12					7	DAY	71.1	105	F
9.	7-8-12	1.15	IN	RAIN	rain					
10.	7-10-12					7	DAY	65.9	93.9	F
11.	7-14-12	0.11	IN	RAIN	rain					
12.	7-16-12	0.02	IN	RAIN	rain					
13.	7-17-12					7	DAY	60	102.3	F
14.	7-17-12	0.02	IN	RAIN	rain					
15.	7-19-12	1.0	IN	SPWACA	sprinkler - water cannon/traveling gun					
16.	7-23-12	0.02	IN	RAIN	rain					
17.	7-24-12					7	DAY	64.1	102.1	F
18.	7-26-12	0.53	IN	RAIN	rain					
19.	7-27-12	0.02	IN	RAIN	rain					
20.	7-29-12	0.27	IN	RAIN	rain					
21.	7-31-12					7	DAY	62.7	97.9	F
22.	8-2-12	0.02	IN	RAIN	rain					
23.	8-3-12	0.02	IN	RAIN	rain					
24.	8-4-12	2.83	IN	RAIN	rain					
25.	8-5-12	2.09	IN	RAIN	rain					
26.	8-7-12					7	DAY	54.1	97.2	F
27.	8-13-12	0.38	IN	RAIN	rain					
28.	8-14-12					7	DAY	51.2	92.5	F
29.	8-16-12	0.66	IN	RAIN	rain					
30.	8-21-12					7	DAY	54.6	94.1	F
31.	8-28-12					7	DAY	54.8	96.2	F
32.	8-31-12	1.54	IN	RAIN	rain					
33.	9-1-12	4.25	IN	RAIN	rain					
34.	9-2-12	0.55	IN	RAIN	rain					
35.	9-3-12	0.03	IN	RAIN	rain					
36.	9-4-12					7	DAY	49.8	93.5	F
37.	9-5-12	0.02	IN	RAIN	rain					
38.	9-6-12	0.23	IN	RAIN	rain					
39.	9-7-12	0.44	IN	RAIN	rain					
40.	9-11-12					7	DAY	52.2	83.5	F
41.	9-15-12	0.03	IN	RAIN	rain					
42.	9-16-12	0.06	IN	RAIN	rain					
43.	9-17-12	0.22	IN	RAIN	rain					
44.	9-18-12					7	DAY	36.5	78.1	F
45.	9-21-12	0.01	IN	RAIN	rain					
46.	9-25-12					7	DAY	46.2	85.4	F
47.	9-26-12	0.22	IN	RAIN	rain					
48.	9-28-12	0.06	IN	RAIN	rain					
49.	10-1-12	0.39	IN	RAIN	rain					
50.	10-2-12					7	DAY	34.9	78.6	F
51.	10-3-12	0.13	IN	RAIN	rain					
52.	10-5-12	0.32	IN	RAIN	rain					
53.	10-9-12					7	DAY	31.7	78.8	F
54.	10-11-12	0.14	IN	RAIN	rain					
55.	10-13-12	0.03	IN	RAIN	rain					
56.	10-14-12	0.25	IN	RAIN	rain					
57.	10-16-12					7	DAY	43	78.7	F
58.	10-17-12	1.12	IN	RAIN	rain					
59.	10-19-12	0.06	IN	RAIN	rain					
60.	10-23-12					7	DAY	33.9	79.5	F
61.	10-25-12	0.27	IN	RAIN	rain					
62.	10-26-12	0.35	IN	RAIN	rain					

Southern Illinois University

General Soybean Herbicide Program Comparison.

Trial ID: 12-TIC-S90
Location: Tree Improvement Ctr.
Investigator: Bryan Young

Application Description

	A	B	C	D
Application Date:	7-18-12	8-8-12	9-10-12	9-27-12
Time of Day:	15:30	11:30	13:30	8:00
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	PRE	4-6"W-1	4-6"W-2	2-4"RG
Application Placement:	BROSOI	BROFOL	BROFOL	BROFOL
Applied By:	RJW	NRJ	JRK	JRK
Air Temperature, Unit:	99 F	92 F	80 F	60 F
% Relative Humidity:	42	40	42	57
Wind Velocity, Unit:	2 MPH	1 MPH	1 MPH	0 MPH
Wind Direction:	SW	S	N	
Dew Presence (Y/N):	N no	N no	N no	Y yes
Soil Temperature, Unit:	96 F	81 F	10 F	62 F
Soil Moisture:	BELNOR	NORMAL	NORMAL	NORMAL
% Cloud Cover:	70	10	10	0
Next Rain Occurred On:	7-19-12	8-13-12	9-15-12	9-28-12

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC	DESC	DESC
Stage Majority, Percent:	NA	V2	R3	R4
Stage Minimum, Percent:		V2	R3	R3
Stage Maximum, Percent:		V2	R3	R4
Height, Unit:		8 IN	25 IN	26 IN
Height Minimum, Maximum:		6 8	21 25	21 26

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	AMARE W DESC	AMARE W DESC	AMARE W DESC	AMARE W DESC
Stage Majority, Percent:	NA	6	20	NA
Stage Minimum, Percent:		2	16	
Stage Maximum, Percent:		10	30	
Height, Unit:		5 IN	18 IN	
Height Minimum, Maximum:		1 7	5 24	
Density, Unit:		2 FT2	0.01 FT2	
Pest 2 Code, Type, Scale:	GGGAN W DESC	GGGAN W DESC	GGGAN W DESC	GGGAN W DESC
Stage Majority, Percent:	NA	3	NA	NA
Stage Minimum, Percent:		1		
Stage Maximum, Percent:		4		
Height, Unit:		1 IN		
Height Minimum, Maximum:		1 2		
Density, Unit:		0.25 FT2		

Application Equipment

	A	B	C	D
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR	XR
Nozzle Size:	8002	8002	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA

General Soybean Herbicide Program Comparison.

Trial ID: 12-TIC-S90
Location: Tree Improvement Ctr.
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 11-2-12 Moisture Percent	GLXMA 11-2-12 Yield bu/A	GLXMA 9-10-12 Injury Percent 0 DA-C	GLXMA 10-1-12 Injury Percent 21 DA-C	GLXMA 10-22-12 Injury Percent 42 DA-C
1	NONTREATED									15.2 a	25 a	0 a	0 a	0 a
2	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	11.9 b	26 a	0 a	0 a	0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W-2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C					
3	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	12.0 b	30 a	0 a	0 a	0 a
	FLEXSTAR GT	3.31	SL	1.24	lb ae/a	3	pt/a	4-6"W-2	C					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"W-2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C					
4	SEQUENCE	5.25	SL	1.64	lb ae/a	2.5	pt/a	PRE	A	12.0 b	26 a	0 a	0 a	0 a
	FLEXSTAR GT	3.31	SL	1.24	lb ae/a	3	pt/a	4-6"W-2	C					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"W-2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C					
5	SONIC	70	WG	0.131	lb ai/a	3	oz/a	PRE	A	11.9 b	31 a	0 a	0 a	0 a
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	4-6"W-2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C					
6	SONIC	70	WG	0.197	lb ai/a	4.5	oz/a	PRE	A	11.9 b	29 a	0 a	0 a	0 a
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	4-6"W-2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C					
7	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	4-6"W-1	B	12.0 b	34 a	0 a	0 a	0 a
	FIRSTRATE	84	WG	0.0158	lb ai/a	0.3	oz/a	4-6"W-1	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-1	B					
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	2-4"RG	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"RG	D					
8	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	PRE	A	12.0 b	27 a	0 a	0 a	0 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	4-6"W-2	C					
	SYNCHRONY XP	28.4	WG	0.00586	lb ai/a	0.33	oz/a	4-6"W-2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C					
9	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	11.7 b	34 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W-2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C					
10	FIERCE XLT	55.68	WG	0.139	lb ai/a	4	oz/a	PRE	A	12.1 b	32 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W-2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C					
11	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	11.7 b	27 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W-2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C					
12	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	11.9 b	29 a	0 a	0 a	0 a
	ANTHEM	2.15	SE	0.101	lb ai/a	6	fl oz/a	4-6"W-2	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W-2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C					
13	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	11.7 b	30 a	0 a	0 a	0 a
	ZIDUA	85	WG	0.133	lb ai/a	2.5	oz/a	PRE	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W-2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C					

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

General Soybean Herbicide Program Comparison.

Trial ID: 12-TIC-S90
Location: Tree Improvement Ctr.
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 11-2-12 Moisture Percent	GLXMA 11-2-12 Yield bu/A	GLXMA 9-10-12 Injury Percent 0 DA-C	GLXMA 10-1-12 Injury Percent 21 DA-C	GLXMA 10-22-12 Injury Percent 42 DA-C
14	VALOR SX	51	WG	0.096	lb ai/a	3	oz/a	PRE	A	12.0 b	35 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W-2	C					
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	4-6"W-2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C					
LSD (P=.05)										0.46	8.9	0.0	0.0	0.0
Standard Deviation										0.27	5.3	0.0	0.0	0.0
CV										2.25	17.9	0.0	0.0	0.0
Replicate F										3.072	5.695	0.000	0.000	0.000
Replicate Prob(F)										0.0634	0.0089	1.0000	1.0000	1.0000
Treatment F										31.457	1.146	0.000	0.000	0.000
Treatment Prob(F)										0.0001	0.3684	1.0000	1.0000	1.0000

General Soybean Herbicide Program Comparison.

Trial ID: 12-TIC-S90
Location: Tree Improvement Ctr.
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMARE 9-10-12 Control Percent 0 DA-C	AMARE 10-1-12 Control Percent 21 DA-C	AMARE 10-22-12 Control Percent 42 DA-C	GGGAN 9-10-12 Control Percent 0 DA-C	GGGAN 10-1-12 Control Percent 21 DA-C	GGGAN 10-22-12 Control Percent 42 DA-C
1	NONTREATED									0 c	0 b	0 b	0 d	0 b	0 b
2	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	93 a	99 a	99 a	99 a	99 a	99 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C						
3	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	97 a	99 a	99 a	99 a	99 a	99 a
	FLEXSTAR GT	3.31	SL	1.24	lb ae/a	3	pt/a	4-6"W-2	C						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C						
4	SEQUENCE	5.25	SL	1.64	lb ae/a	2.5	pt/a	PRE	A	83 b	99 a	99 a	95 ab	99 a	99 a
	FLEXSTAR GT	3.31	SL	1.24	lb ae/a	3	pt/a	4-6"W-2	C						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	4-6"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C						
5	SONIC	70	WG	0.131	lb ai/a	3	oz/a	PRE	A	96 a	99 a	99 a	90 bc	99 a	99 a
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	4-6"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C						
6	SONIC	70	WG	0.197	lb ai/a	4.5	oz/a	PRE	A	98 a	99 a	99 a	92 bc	99 a	99 a
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	4-6"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C						
7	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	4-6"W-1	B	99 a	99 a	99 a	99 a	99 a	99 a
	FIRSTRATE	84	WG	0.0158	lb ai/a	0.3	oz/a	4-6"W-1	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-1	B						
	DURANGO DMA	4	SL	0.75	lb ae/a	24	fl oz/a	2-4"RG	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2-4"RG	D						
8	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	PRE	A	99 a	99 a	99 a	94 ab	99 a	99 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	4-6"W-2	C						
	SYNCHRONY XP	28.4	WG	0.00586	lb ai/a	0.33	oz/a	4-6"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C						
9	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	97 a	99 a	99 a	91 bc	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C						
10	FIERCE XLT	55.68	WG	0.139	lb ai/a	4	oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C						
11	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	97 a	99 a	99 a	87 c	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C						
12	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	99 a	99 a	99 a	92 bc	99 a	99 a
	ANTHEM	2.15	SE	0.101	lb ai/a	6	fl oz/a	4-6"W-2	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C						
13	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a	99 a
	ZIDUA	85	WG	0.133	lb ai/a	2.5	oz/a	PRE	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C						

General Soybean Herbicide Program Comparison.

Trial ID: 12-TIC-S90
Location: Tree Improvement Ctr.
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMARE	AMARE	AMARE	GGGAN	GGGAN	GGGAN
	Pest Code									AMARE	AMARE	AMARE	GGGAN	GGGAN	GGGAN
	Crop Code														
	Rating Date									9-10-12	10-1-12	10-22-12	9-10-12	10-1-12	10-22-12
	Rating Type									Control	Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
	Rating Timing														
	Trt-Eval Interval									0 DA-C	21 DA-C	42 DA-C	0 DA-C	21 DA-C	42 DA-C
14	VALOR SX	51	WG	0.096	lb ai/a	3	oz/a	PRE	A	95 a	99 a	99 a	95 ab	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	4-6"W-2	C						
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	4-6"W-2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W-2	C						
	LSD (P=.05)									10.0	0.0	0.0	6.0	0.0	0.0
	Standard Deviation									6.0	0.0	0.0	3.6	0.0	0.0
	CV									6.66	0.0	0.0	4.07	0.0	0.0
	Replicate F									0.727	0.000	0.000	0.173	0.000	0.000
	Replicate Prob(F)									0.4930	1.0000	1.0000	0.8422	1.0000	1.0000
	Treatment F									57.623	0.000	0.000	153.470	0.000	0.000
	Treatment Prob(F)									0.0001	1.0000	1.0000	0.0001	1.0000	1.0000

Southern Illinois University

General Soybean Herbicide Program Comparison.

Trial ID: 12-TIC-S90
Location: Tree Improvement Ctr.
Investigator: Bryan Young

Trial Comments

1. Protocol: Syngenta, Dow, DuPont, Valent, FMC, BASF, Monsanto.
2. CI/WC at 0, 21, and 42 DA-C.
3. Yield.
4. GGGAN = Annual grasses including SETFA (giant foxtail) and DIGSA (large crabgrass).
5. Following the PRE application 1.0 inch of irrigation was applied the next day.
6. Harvested 11-2-12, (2) 30 inch rows by 27 ft.

Fierce Demonstration in Soybean.

Trial ID: 12-21N-E70
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-23-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Demonstrate the crop tolerance and weed control spectrum of
Fierce and Fierce XLT in soybean.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 5-23-12
Planting Method: SEEDED Seeded **Rate, Unit:** 75 LB/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** SETFA - Setaria faberi Herrm.
Common Name: foxtail, giant

Pest 2 Type: W **Code:** ABUTH - Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 3 Type: W **Code:** IPOHE - Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Pest 4 Type: W **Code:** AMBTR - Ambrosia trifida L.
Common Name: ragweed, giant

Pest 5 Type: W **Code:** XANST - Xanthium strumarium L.
Common Name: cocklebur, common

Site and Design

Plot Width, Unit: 20 FT **Site Type:** FIELD field
Plot Length, Unit: 90 FT
Plot Area, Unit: 1800 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 1 **Study Design:** NONRAN Non-Randomized

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 150 LB/A

Soil Description

% OM: 2.1 **Texture:** SIL SILT LOAM
pH: 6 **Soil Name:** BETHALTO
CEC: 12

Additional Measured Elements

Element	Quantity	Unit
P1	89	LB/A
K	400	LB/A

Fierce Demonstration in Soybean.

Trial ID: 12-21N-E70
Location: Belleville Res. Center
Investigator: Bryan Young

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Application Description

	A
Application Date:	5-24-12
Time of Day:	8:00
Application Method:	Spray
Application Timing:	PRE
Application Placement:	BROFOL
Applied By:	RJW
Air Temperature, Unit:	75 F
% Relative Humidity:	54
Wind Velocity, Unit:	8 MPH
Wind Direction:	S
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	69 F
Soil Moisture:	BELNOR
% Cloud Cover:	30
Next Rain Occurred On:	5-31-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	SETFA W DESC
Stage Majority, Percent:	NA
Pest 2 Code, Type, Scale:	ABUTH W DESC
Stage Majority, Percent:	NA
Pest 3 Code, Type, Scale:	IPOHE W DESC
Stage Majority, Percent:	NA
Pest 4 Code, Type, Scale:	AMBTR W DESC
Stage Majority, Percent:	NA
Pest 5 Code, Type, Scale:	XANST W DESC
Stage Majority, Percent:	NA

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	TTI
Nozzle Size:	11002
Boom Length, Unit:	10 FT
Spray Volume, Unit:	15 GPA

Fierce Demonstration in Soybean.

Trial ID: 12-21N-E70
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA	SETFA	ABUTH	IPOHE	AMBTR	XANST
	Pest Code									GLXMA	SETFA	ABUTH	IPOHE	AMBTR	XANST
	Crop Code														
	Rating Date									7-5-12	7-5-12	7-5-12	7-5-12	7-5-12	7-5-12
	Rating Type									Injury	Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
	Rating Timing														
	Trt-Eval Interval									42 DA-A	42 DA-A	42 DA-A	42 DA-A	42 DA-A	42 DA-A
1	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	0	40	50	30	60	50
2	FIERCE XLT	55.68	WG	0.139	lb ai/a	4	oz/a	PRE	A	0	60	90	70	80	80
3	NONTREATED									0	0	0	0	0	0
	LSD (P=.05)									.	.	.	.	.	.
	Standard Deviation									.	.	.	.	.	.
	CV									.	.	.	.	.	.

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Fierce Demonstration in Soybean.

Trial ID: 12-21N-E70
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Valent.
2. Ratings: CI/WC 42 DAT.
3. Blanket glyphosate POST possible after 42 DAT rating, was applied on 7-6-12.
4. Notify Eric Ott when planted.
5. Rainfall following the PRE application was 0.28 inch 7 days later and 0.75 inch 18 days later.
6. Not harvested.

Southern Illinois University

DuPont Crop Protection Demonstration in Soybean.

Trial ID: 12-21N-ME80
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-23-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Demonstrate the performance of DuPont crop protection products in soybean.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 5-23-12
Planting Method: SEEDED Seeded **Rate, Unit:** 75 LB/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** SETFA - Setaria faberi Herrm.
Common Name: foxtail, giant

Pest 2 Type: W **Code:** ABUTH - Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 3 Type: W **Code:** IPOHE - Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 90 FT
Plot Area, Unit: 900 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 1 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 150 LB/A

Soil Description

% OM: 2.1 **Texture:** SIL SILT LOAM
pH: 6 **Soil Name:** BETHALTO
CEC: 12

Additional Measured Elements

Element	Quantity	Unit
P1	89	LB/A
K	400	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

DuPont Crop Protection Demonstration in Soybean.

Trial ID: 12-21N-ME80
Location: Belleville Res. Center
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-24-12					7	DAY	42.6	74.3	F
2.	4-29-12	3.06	IN	RAIN	rain					
3.	4-30-12	0.66	IN	RAIN	rain					
4.	5-1-12	0.13	IN	RAIN	rain					
5.	5-1-12					7	DAY	33.5	76	F
6.	5-4-12	0.25	IN	RAIN	rain					
7.	5-7-12	0.29	IN	RAIN	rain					
8.	5-8-12					7	DAY	47.5	87.8	F
9.	5-15-12					7	DAY	37.7	81.3	F
10.	5-21-12	0.18	IN	RAIN	rain					
11.	5-22-12					7	DAY	47.6	82.3	F
12.	5-29-12					7	DAY	48.1	90	F
13.	5-30-12	0.07	IN	RAIN	rain					
14.	5-31-12	0.21	IN	RAIN	rain					
15.	6-5-12					7	DAY	50.2	90.1	F
16.	6-11-12	0.75	IN	RAIN	rain					
17.	6-12-12					7	DAY	52.4	93.6	F
18.	6-17-12	0.36	IN	RAIN	rain					
19.	6-19-12					7	DAY	56.3	94	F
20.	6-26-12					7	DAY	51.8	105.4	F
21.	7-3-12					7	DAY	68.9	104.7	F
22.	7-8-12	0.28	IN	RAIN	rain					
23.	7-10-12					7	DAY	63.4	95	F
24.	7-17-12					7	DAY	61	102.2	F
25.	7-24-12					7	DAY	61	103	F
26.	7-29-12	0.15	IN	RAIN	rain					
27.	7-31-12					7	DAY	60.2	99.1	F
28.	8-5-12	0.18	IN	RAIN	rain					
29.	8-7-12					7	DAY	50.2	99.8	F
30.	8-13-12	0.88	IN	RAIN	rain					
31.	8-14-12					7	DAY	51	95.6	F
32.	8-17-12	1.19	IN	RAIN	rain					
33.	8-21-12					7	DAY	54.7	94.2	F
34.	8-26-12	0.04	IN	RAIN	rain					
35.	8-27-12	1.66	IN	RAIN	rain					
36.	8-31-12	0.11	IN	RAIN	rain					

Application Description

	A	B	C
Application Date:	5-24-12	6-22-12	8-1-12
Time of Day:	8:00	8:00	9:00
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	V2	R3
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	RJW	LAH	RJW
Air Temperature, Unit:	75 F	76 F	80 F
% Relative Humidity:	54	62	57
Wind Velocity, Unit:	8 MPH	2 MPH	6 MPH
Wind Direction:	S	N	E
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	69 F	76 F	80 F
Soil Moisture:	BELNOR	BELNOR	BELNOR
% Cloud Cover:	30	20	30
Next Rain Occurred On:	5-30-12	7-7-12	8-4-12

DuPont Crop Protection Demonstration in Soybean.

Trial ID: 12-21N-ME80
Location: Belleville Res. Center
Investigator: Bryan Young

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	V2	R3
Stage Minimum, Percent:		V2	R3
Stage Maximum, Percent:		V2	R3
Height, Unit:		8 IN	24 IN
Height Minimum, Maximum:		6 8	22 24

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	SETFA W DESC	SETFA W DESC	SETFA W DESC
Stage Majority, Percent:	NA	4	NA
Stage Minimum, Percent:		2	
Stage Maximum, Percent:		5	
Height, Unit:		4 IN	
Height Minimum, Maximum:		1 6	
Density, Unit:		1 FT2	
Pest 2 Code, Type, Scale:	ABUTH W DESC	ABUTH W DESC	ABUTH W DESC
Stage Majority, Percent:	NA	4	NA
Stage Minimum, Percent:		Coty	
Stage Maximum, Percent:		5	
Height, Unit:		2 IN	
Height Minimum, Maximum:		0.5 3	
Density, Unit:		3 FT2	
Pest 3 Code, Type, Scale:	IPOHE W DESC	IPOHE W DESC	IPOHE W DESC
Stage Majority, Percent:	NA	4	NA
Stage Minimum, Percent:		Coty	
Stage Maximum, Percent:		6	
Height, Unit:		1 IN	
Height Minimum, Maximum:		1 3	
Density, Unit:		3 FT2	

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	TTI	XR	XR
Nozzle Size:	11002	8002	8002
Boom Length, Unit:	10 FT	10 FT	10 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

DuPont Crop Protection Demonstration in Soybean.

Trial ID: 12-21N-ME80
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-30-12 Moisture Percent	GLXMA 10-30-12 Test wt. lb/bu	GLXMA 10-30-12 Yield bu/A	GLXMA 6-21-12 Injury Percent -1 DA-B	GLXMA 7-20-12 Injury Percent 28 DA-B	SETFA 6-21-12 Control Percent -1 DA-B	SETFA 7-20-12 Control Percent 28 DA-B
1	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A	12.1	57.4	31	0	0	0	0
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	PRE	A							
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	R3	C							
	STEWARD	1.25	EC	0.0586	lb ai/a	6	fl oz/a	R3	C							
2	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	PRE	A	11.4	58.0	63	0	0	0	97
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	V2	B							
	SYNCHRONY XP	28.4	WG	0.00666	lb ai/a	0.375	oz/a	V2	B							
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	V2	B							
	N-PAK AMS	3.4	SL	3.92	% v/v	2	lb ai/a	V2	B							
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	R3	C							
	STEWARD	1.25	EC	0.0586	lb ai/a	6	fl oz/a	R3	C							
3	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	11.5	57.8	68	0	0	20	97
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	V2	B							
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	V2	B							
	N-PAK AMS	3.4	SL	3.92	% v/v	2	lb ai/a	V2	B							
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	R3	C							
	STEWARD	1.25	EC	0.0586	lb ai/a	6	fl oz/a	R3	C							
4	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	11.2	58.1	63	0	0	70	97
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	PRE	A							
	CLASSIC	25	WG	0.00516	lb ai/a	0.33	oz/a	V2	B							
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	V2	B							
	N-PAK AMS	3.4	SL	3.92	% v/v	2	lb ai/a	V2	B							
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	R3	C							
	STEWARD	1.25	EC	0.0586	lb ai/a	6	fl oz/a	R3	C							
5	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	V2	B	11.3	57.9	63	.	0	.	99
	CLASSIC	25	WG	0.00516	lb ai/a	0.33	oz/a	V2	B							
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	V2	B							
	N-PAK AMS	3.4	SL	3.92	% v/v	2	lb ai/a	V2	B							
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	R3	C							
	STEWARD	1.25	EC	0.0586	lb ai/a	6	fl oz/a	R3	C							
6	AUTHORITY XL	70	WG	0.219	lb ai/a	5	oz/a	PRE	A	11.8	57.4	68	0	0	50	97
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	V2	B							
	N-PAK AMS	3.4	SL	3.92	% v/v	2	lb ai/a	V2	B							
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	R3	C							
	STEWARD	1.25	EC	0.0586	lb ai/a	6	fl oz/a	R3	C							
7	NONTREATED									14.5	55.0	13	0	0	0	0
LSD (P=.05)										.	.	.	.	.	.	.
Standard Deviation										.	.	.	.	.	.	.
CV										.	.	.	.	.	.	.

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

DuPont Crop Protection Demonstration in Soybean.

Trial ID: 12-21N-ME80
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ABUTH 6-21-12 Control Percent -1 DA-B	ABUTH 7-20-12 Control Percent 28 DA-B	IPOHE 6-21-12 Control Percent -1 DA-B	IPOHE 7-20-12 Control Percent 28 DA-B
1	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	A	50	50	50	40
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	PRE	A				
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	R3	C				
	STEWARD	1.25	EC	0.0586	lb ai/a	6	fl oz/a	R3	C				
2	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	PRE	A	65	97	70	97
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	V2	B				
	SYNCHRONY XP	28.4	WG	0.00666	lb ai/a	0.375	oz/a	V2	B				
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	V2	B				
	N-PAK AMS	3.4	SL	3.92	% v/v	2	lb ai/a	V2	B				
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	R3	C				
	STEWARD	1.25	EC	0.0586	lb ai/a	6	fl oz/a	R3	C				
3	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	75	99	75	99
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	V2	B				
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	V2	B				
	N-PAK AMS	3.4	SL	3.92	% v/v	2	lb ai/a	V2	B				
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	R3	C				
	STEWARD	1.25	EC	0.0586	lb ai/a	6	fl oz/a	R3	C				
4	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	A	90	99	90	99
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	PRE	A				
	CLASSIC	25	WG	0.00516	lb ai/a	0.33	oz/a	V2	B				
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	V2	B				
	N-PAK AMS	3.4	SL	3.92	% v/v	2	lb ai/a	V2	B				
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	R3	C				
	STEWARD	1.25	EC	0.0586	lb ai/a	6	fl oz/a	R3	C				
5	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	V2	B	.	97	.	99
	CLASSIC	25	WG	0.00516	lb ai/a	0.33	oz/a	V2	B				
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	V2	B				
	N-PAK AMS	3.4	SL	3.92	% v/v	2	lb ai/a	V2	B				
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	R3	C				
	STEWARD	1.25	EC	0.0586	lb ai/a	6	fl oz/a	R3	C				
6	AUTHORITY XL	70	WG	0.219	lb ai/a	5	oz/a	PRE	A	80	99	80	99
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	1	qt/a	V2	B				
	N-PAK AMS	3.4	SL	3.92	% v/v	2	lb ai/a	V2	B				
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	R3	C				
	STEWARD	1.25	EC	0.0586	lb ai/a	6	fl oz/a	R3	C				
7	NONTREATED									0	0	0	0
LSD (P=.05)										.	.	.	.
Standard Deviation										.	.	.	.
CV										.	.	.	.

Southern Illinois University

DuPont Crop Protection Demonstration in Soybean.

Trial ID: 12-21N-ME80
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: DuPont (12-097).
2. Ratings: CI/WC at 0 and 28 DA-B.
3. Yield.
4. On 6-22-12 researcher noted extensive deer feeding on soybeans.
5. Harvested 10-30-12, (2) 30 inch rows by 87 ft.

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-23-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate the performance of Syngenta Seed and Crop Protection Programs in soybean.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: See treatment list
BBCH Scale: BSOY **Planting Date:** 5-23-12
Planting Method: SEEDED Seeded **Rate, Unit:** 75 LB/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** IPOHE - Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Pest 2 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 3 Type: W **Code:** CHEAL - Chenopodium album L.
Common Name: lambsquarters, common

Pest 4 Type: W **Code:** PANDI - Panicum dichotomiflorum Michx.
Common Name: panicum, fall

Pest 5 Type: W **Code:** ABUTH - Abutilon theophrasti Medik.
Common Name: velvetleaf

Site and Design

Plot Width, Unit: 20 FT **Site Type:** FIELD field
Plot Length, Unit: 50 FT
Plot Area, Unit: 1000 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 100 LB/A

Soil Description

% OM: 1.9 **Texture:** SIL SILT LOAM
pH: 6.5 **Soil Name:** BETHALTO
CEC: 13

Additional Measured Elements

Element	Quantity	Unit
P1	74	LB/A
K	320	LB/A

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-24-12					7	DAY	42.6	74.3	F
2.	4-29-12	3.06	IN	RAIN	rain					
3.	4-30-12	0.66	IN	RAIN	rain					
4.	5-1-12	0.13	IN	RAIN	rain					
5.	5-1-12					7	DAY	33.5	76	F
6.	5-4-12	0.25	IN	RAIN	rain					
7.	5-7-12	0.29	IN	RAIN	rain					
8.	5-8-12					7	DAY	47.5	87.8	F
9.	5-15-12					7	DAY	37.7	81.3	F
10.	5-21-12	0.18	IN	RAIN	rain					
11.	5-22-12					7	DAY	47.6	82.3	F
12.	5-29-12					7	DAY	48.1	90	F
13.	5-30-12	0.07	IN	RAIN	rain					
14.	5-31-12	0.21	IN	RAIN	rain					
15.	6-5-12					7	DAY	50.2	90.1	F
16.	6-11-12	0.75	IN	RAIN	rain					
17.	6-12-12					7	DAY	52.4	93.6	F
18.	6-17-12	0.36	IN	RAIN	rain					
19.	6-19-12					7	DAY	56.3	94	F
20.	6-26-12					7	DAY	51.8	105.4	F
21.	7-3-12					7	DAY	68.9	104.7	F
22.	7-8-12	0.28	IN	RAIN	rain					
23.	7-10-12					7	DAY	63.4	95	F
24.	7-17-12					7	DAY	61	102.2	F
25.	7-24-12					7	DAY	61	103	F
26.	7-29-12	0.15	IN	RAIN	rain					
27.	7-31-12					7	DAY	60.2	99.1	F
28.	8-5-12	0.18	IN	RAIN	rain					
29.	8-7-12					7	DAY	50.2	99.8	F
30.	8-13-12	0.88	IN	RAIN	rain					
31.	8-14-12					7	DAY	51	95.6	F
32.	8-17-12	1.19	IN	RAIN	rain					
33.	8-21-12					7	DAY	54.7	94.2	F
34.	8-26-12	0.04	IN	RAIN	rain					
35.	8-27-12	1.66	IN	RAIN	rain					
36.	8-31-12	0.11	IN	RAIN	rain					

Application Description

	A	B	C	D
Application Date:	5-25-12	6-22-12	7-13-12	8-1-12
Time of Day:	8:30	9:30	11:00	8:00
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	PRE	4-6"W	21DA-B	R3
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	LAH	LAH	RFK	LAH
Air Temperature, Unit:	81 F	81 F	86 F	82 F
% Relative Humidity:	65	49	59	69
Wind Velocity, Unit:	2 MPH	5 MPH	5 MPH	6 MPH
Wind Direction:	S	N	E	E
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	69 F	76 F	81 F	82 F
Soil Moisture:	BELNOR	BELNOR	BELNOR	BELNOR
% Cloud Cover:	0	20	0	30
Next Rain Occurred On:	5-31-12	7-8-12	7-29-12	8-4-12

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC	DESC	DESC
Stage Majority, Percent:	NA	V5	R2	R3
Stage Minimum, Percent:		V4	R2	R3
Stage Maximum, Percent:		V5	R2	R3
Height, Unit:		10 IN	18 IN	28 IN
Height Minimum, Maximum:		8 10	16 18	24 28

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	IPOHE W DESC	IPOHE W DESC	IPOHE W DESC	IPOHE W DESC
Stage Majority, Percent:	NA	10	10+	NA
Stage Minimum, Percent:		3	10	
Stage Maximum, Percent:		35	10+	
Height, Unit:		5 IN	16 IN	
Height Minimum, Maximum:		2 6	8 24	
Density, Unit:		2 FT2	2 FT2	
Pest 2 Code, Type, Scale:	AMATA W DESC	AMATA W DESC	AMATA W DESC	AMATA W DESC
Stage Majority, Percent:	NA	20	10+	NA
Stage Minimum, Percent:		20	10	
Stage Maximum, Percent:		30	10+	
Height, Unit:		10 IN	16 IN	
Height Minimum, Maximum:		8 14	12 18	
Density, Unit:		0.01 FT2	0.001 FT2	
Pest 3 Code, Type, Scale:	CHEAL W DESC	CHEAL W DESC	CHEAL W DESC	CHEAL W DESC
Stage Majority, Percent:	NA	30	10+	NA
Stage Minimum, Percent:		10	10	
Stage Maximum, Percent:		40	10+	
Height, Unit:		8 IN	20 IN	
Height Minimum, Maximum:		4 12	15 20	
Density, Unit:		0.1 FT2	0.01 FT2	
Pest 4 Code, Type, Scale:	PANDI W DESC	PANDI W DESC	PANDI W DESC	PANDI W DESC
Stage Majority, Percent:	NA	NA	10+	NA
Stage Minimum, Percent:			10	
Stage Maximum, Percent:			10+	
Height, Unit:			8 IN	
Height Minimum, Maximum:			5 10	
Density, Unit:			0.01 FT2	
Pest 5 Code, Type, Scale:	ABUTH W DESC	ABUTH W DESC	ABUTH W DESC	ABUTH W DESC
Stage Majority, Percent:	NA	NA	10+	NA
Stage Minimum, Percent:			10	
Stage Maximum, Percent:			10+	
Height, Unit:			16 IN	
Height Minimum, Maximum:			8 24	
Density, Unit:			0.1 FT2	

Application Equipment

	A	B	C	D
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR	XR
Nozzle Size:	8002	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-31-12 Moisture Percent	GLXMA 10-31-12 Test wt. lb/bu	GLXMA 10-31-12 Yield bu/A
	Pest Code											
	Crop Code											
	Rating Date											
	Rating Type											
	Rating Unit											
	Rating Timing											
	Trt-Eval Interval											
1	NK S49-F8 No seed treatment									11.5 a	58.0 abc	67 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
2	NK S49-F8 Cruiser Maxx									11.7 a	57.9 a-f	64 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
3	NK S49-F8 Avicta									11.5 a	58.0 a-f	66 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
4	NK S46-A1 No seed treatment									11.6 a	57.7 fg	65 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
5	NK S46-A1 Cruiser Maxx									11.7 a	57.6 g	61 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
6	NK S46-A1 Avicta									11.6 a	57.7 efg	59 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
7	NK S49-F8 No seed treatment									11.4 a	58.1 a	67 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-31-12 Moisture Percent	GLXMA 10-31-12 Test wt. lb/bu	GLXMA 10-31-12 Yield bu/A
	Pest Code											
	Crop Code											
	Rating Date											
	Rating Type											
	Rating Unit											
	Rating Timing											
	Trt-Eval Interval											
8	NK S49-F8 Cruiser Maxx									11.5 a	58.0 a-f	67 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
9	NK S49-F8 Avicta									11.3 a	58.1 ab	67 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
10	NK S46-A1 No seed treatment									11.4 a	57.8 a-g	60 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
11	NK S46-A1 Cruiser Maxx									11.5 a	57.8 b-g	54 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
12	NK S46-A1 Avicta									11.4 a	57.8 a-g	53 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
13	NK S49-F8 No seed treatment									11.5 a	58.0 abc	66 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
14	NK S49-F8 Cruiser Maxx									11.6 a	58.0 a-e	66 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
15	NK S49-F8 Avicta									11.5 a	58.0 abc	70 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-31-12 Moisture Percent	GLXMA 10-31-12 Test wt. lb/bu	GLXMA 10-31-12 Yield bu/A
16	NK S46-A1 No seed treatment									11.5 a	57.8 a-g	62 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
17	NK S46-A1 Cruiser Maxx									11.6 a	57.8 c-g	60 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
18	NK S46-A1 Avicta									11.5 a	57.7 c-g	54 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
19	NK S49-F8 No seed treatment									11.5 a	58.0 a-f	66 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
20	NK S49-F8 Cruiser Maxx									11.6 a	57.9 a-g	66 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
21	NK S49-F8 Avicta									11.4 a	58.0 a-d	66 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
22	NK S46-A1 No seed treatment									11.5 a	57.7 efg	59 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
23	NK S46-A1 Cruiser Maxx									11.5 a	57.7 d-g	57 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-31-12 Moisture Percent	GLXMA 10-31-12 Test wt. lb/bu	GLXMA 10-31-12 Yield bu/A
	Pest Code											
	Crop Code											
	Rating Date											
	Rating Type											
	Rating Unit											
	Rating Timing											
	Trt-Eval Interval											
24	NK S46-A1 Avicta									11.5 a	57.7 c-g	52 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
	LSD (P=.05)									0.48	0.30	11.3
	Standard Deviation									0.29	0.18	6.9
	CV									2.52	0.32	11.05
	Replicate F									1.784	5.653	1.116
	Replicate Prob(F)									0.1799	0.0065	0.3365
	Treatment F									0.248	1.876	1.737
	Treatment Prob(F)									0.9997	0.0361	0.0571

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	WEED 6-22-12 Pressure H/M/L/no 0 DA-B	WEED 7-13-12 Pressure H/M/L/no 21 DA-B	WEED 8-1-12 Pressure H/M/L/no 0 DA-D
1	NK S49-F8 No seed treatment									1.7 a	0.7 cd	0.3 c
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
2	NK S49-F8 Cruiser Maxx									1.3 a	0.7 cd	0.3 c
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
3	NK S49-F8 Avicta									1.3 a	2.3 a	1.3 ab
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
4	NK S46-A1 No seed treatment									1.0 a	0.3 d	0.3 c
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
5	NK S46-A1 Cruiser Maxx									1.0 a	0.3 d	0.3 c
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
6	NK S46-A1 Avicta									1.0 a	1.7 ab	1.0 abc
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
7	NK S49-F8 No seed treatment									1.0 a	0.7 cd	0.7 bc
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	WEED 6-22-12 Pressure H/M/L/no 0 DA-B	WEED 7-13-12 Pressure H/M/L/no 21 DA-B	WEED 8-1-12 Pressure H/M/L/no 0 DA-D
8	NK S49-F8 Cruiser Maxx									1.3 a	0.7 cd	0.7 bc
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
9	NK S49-F8 Avicta									1.3 a	2.3 a	1.3 ab
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
10	NK S46-A1 No seed treatment									1.3 a	1.0 bcd	1.0 abc
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
11	NK S46-A1 Cruiser Maxx									1.0 a	1.0 bcd	0.3 c
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
12	NK S46-A1 Avicta									1.0 a	1.3 bc	1.0 abc
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D			
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
13	NK S49-F8 No seed treatment									1.7 a	1.0 bcd	0.7 bc
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
14	NK S49-F8 Cruiser Maxx									1.7 a	0.3 d	0.3 c
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
15	NK S49-F8 Avicta									1.7 a	2.3 a	1.7 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	WEED 6-22-12 Pressure H/M/L/no 0 DA-B	WEED 7-13-12 Pressure H/M/L/no 21 DA-B	WEED 8-1-12 Pressure H/M/L/no 0 DA-D
16	NK S46-A1 No seed treatment									1.0 a	0.7 cd	0.7 bc
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
17	NK S46-A1 Cruiser Maxx									1.0 a	1.0 bcd	0.7 bc
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
18	NK S46-A1 Avicta									1.7 a	1.7 ab	1.7 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
19	NK S49-F8 No seed treatment									1.7 a	0.7 cd	0.7 bc
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
20	NK S49-F8 Cruiser Maxx									1.7 a	1.0 bcd	1.0 abc
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
21	NK S49-F8 Avicta									1.3 a	2.3 a	1.3 ab
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
22	NK S46-A1 No seed treatment									1.3 a	0.7 cd	0.3 c
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
23	NK S46-A1 Cruiser Maxx									1.3 a	1.0 bcd	0.3 c
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	WEED	WEED	WEED
	Pest Code									WEED	WEED	WEED
	Crop Code											
	Rating Date									6-22-12	7-13-12	8-1-12
	Rating Type									Pressure	Pressure	Pressure
	Rating Unit									H/M/L/no	H/M/L/no	H/M/L/no
	Rating Timing											
	Trt-Eval Interval									0 DA-B	21 DA-B	0 DA-D
24	NK S46-A1 Avicta									1.0 a	1.3 bc	1.0 abc
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C			
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D			
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D			
	LSD (P=.05)									0.93	0.76	0.81
	Standard Deviation									0.56	0.46	0.49
	CV									43.09	40.92	62.0
	Replicate F									2.282	5.308	3.286
	Replicate Prob(F)									0.1135	0.0084	0.0464
	Treatment F									0.725	6.128	2.383
	Treatment Prob(F)									0.7955	0.0001	0.0060

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	INSECT 6-22-12 Pressure H/M/L/no 0 DA-B	INSECT 7-13-12 Pressure H/M/L/no 21 DA-B	INSECT 8-1-12 Pressure H/M/L/no 0 DA-D	INSECT 8-8-12 Pressure H/M/L/no 7 DA-D	INSECT 8-22-12 Pressure H/M/L/no 21 DA-D	INSECT 9-5-12 Pressure H/M/L/no 35 DA-D
1	NK S49-F8 No seed treatment									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
2	NK S49-F8 Cruiser Maxx									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
3	NK S49-F8 Avicta									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
4	NK S46-A1 No seed treatment									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
5	NK S46-A1 Cruiser Maxx									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
6	NK S46-A1 Avicta									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
7	NK S49-F8 No seed treatment									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	INSECT 6-22-12 Pressure H/M/L/no 0 DA-B	INSECT 7-13-12 Pressure H/M/L/no 21 DA-B	INSECT 8-1-12 Pressure H/M/L/no 0 DA-D	INSECT 8-8-12 Pressure H/M/L/no 7 DA-D	INSECT 8-22-12 Pressure H/M/L/no 21 DA-D	INSECT 9-5-12 Pressure H/M/L/no 35 DA-D
8	NK S49-F8 Cruiser Maxx									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
9	NK S49-F8 Avicta									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
10	NK S46-A1 No seed treatment									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
11	NK S46-A1 Cruiser Maxx									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
12	NK S46-A1 Avicta									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
13	NK S49-F8 No seed treatment									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
14	NK S49-F8 Cruiser Maxx									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
15	NK S49-F8 Avicta									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	INSECT 6-22-12 Pressure H/M/L/no 0 DA-B	INSECT 7-13-12 Pressure H/M/L/no 21 DA-B	INSECT 8-1-12 Pressure H/M/L/no 0 DA-D	INSECT 8-8-12 Pressure H/M/L/no 7 DA-D	INSECT 8-22-12 Pressure H/M/L/no 21 DA-D	INSECT 9-5-12 Pressure H/M/L/no 35 DA-D
16	NK S46-A1 No seed treatment									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
17	NK S46-A1 Cruiser Maxx									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
18	NK S46-A1 Avicta									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
19	NK S49-F8 No seed treatment									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
20	NK S49-F8 Cruiser Maxx									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
21	NK S49-F8 Avicta									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
22	NK S46-A1 No seed treatment									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
23	NK S46-A1 Cruiser Maxx									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	INSECT	INSECT	INSECT	INSECT	INSECT	INSECT
	Pest Code									INSECT	INSECT	INSECT	INSECT	INSECT	INSECT
	Crop Code														
	Rating Date									6-22-12	7-13-12	8-1-12	8-8-12	8-22-12	9-5-12
	Rating Type									Pressure	Pressure	Pressure	Pressure	Pressure	Pressure
	Rating Unit									H/M/L/no	H/M/L/no	H/M/L/no	H/M/L/no	H/M/L/no	H/M/L/no
	Rating Timing														
	Trt-Eval Interval									0 DA-B	21 DA-B	0 DA-D	7 DA-D	21 DA-D	35 DA-D
24	NK S46-A1 Avicta									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
	LSD (P=.05)									0.00	0.00	0.00	0.00	0.00	0.00
	Standard Deviation									0.00	0.00	0.00	0.00	0.00	0.00
	CV									0.0	0.0	0.0	0.0	0.0	0.0
	Replicate F									0.000	0.000	0.000	0.000	0.000	0.000
	Replicate Prob(F)									1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
	Treatment F									0.000	0.000	0.000	0.000	0.000	0.000
	Treatment Prob(F)									1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	INSECT 9-19-12 Pressure H/M/L/no 49 DA-D	INSECT 10-1-12 Pressure H/M/L/no 61 DA-D
	Pest Code									INSECT	INSECT
	Crop Code										
	Rating Date									9-19-12	10-1-12
	Rating Type									Pressure	Pressure
	Rating Unit									H/M/L/no	H/M/L/no
	Rating Timing										
	Trt-Eval Interval									49 DA-D	61 DA-D
1	NK S49-F8 No seed treatment									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
2	NK S49-F8 Cruiser Maxx									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
3	NK S49-F8 Avicta									0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
4	NK S46-A1 No seed treatment									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
5	NK S46-A1 Cruiser Maxx									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
6	NK S46-A1 Avicta									0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
7	NK S49-F8 No seed treatment									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	INSECT 9-19-12 Pressure H/M/L/no 49 DA-D	INSECT 10-1-12 Pressure H/M/L/no 61 DA-D
	Pest Code									INSECT	INSECT
	Crop Code										
	Rating Date									9-19-12	10-1-12
	Rating Type									Pressure	Pressure
	Rating Unit									H/M/L/no	H/M/L/no
	Rating Timing										
	Trt-Eval Interval									49 DA-D	61 DA-D
8	NK S49-F8 Cruiser Maxx									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
9	NK S49-F8 Avicta									0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
10	NK S46-A1 No seed treatment									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
11	NK S46-A1 Cruiser Maxx									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
12	NK S46-A1 Avicta									0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
13	NK S49-F8 No seed treatment									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
14	NK S49-F8 Cruiser Maxx									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
15	NK S49-F8 Avicta									0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	INSECT 9-19-12 Pressure H/M/L/no 49 DA-D	INSECT 10-1-12 Pressure H/M/L/no 61 DA-D
	Pest Code									INSECT	INSECT
	Crop Code										
	Rating Date									9-19-12	10-1-12
	Rating Type									Pressure	Pressure
	Rating Unit									H/M/L/no	H/M/L/no
	Rating Timing										
	Trt-Eval Interval									49 DA-D	61 DA-D
16	NK S46-A1 No seed treatment									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
17	NK S46-A1 Cruiser Maxx									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
18	NK S46-A1 Avicta									0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
19	NK S49-F8 No seed treatment									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
20	NK S49-F8 Cruiser Maxx									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
21	NK S49-F8 Avicta									0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
22	NK S46-A1 No seed treatment									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
23	NK S46-A1 Cruiser Maxx									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	INSECT	INSECT
	Pest Code									INSECT	INSECT
	Crop Code										
	Rating Date									9-19-12	10-1-12
	Rating Type									Pressure	Pressure
	Rating Unit									H/M/L/no	H/M/L/no
	Rating Timing										
	Trt-Eval Interval									49 DA-D	61 DA-D
24	NK S46-A1 Avicta									0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
	LSD (P=.05)									0.00	0.00
	Standard Deviation									0.00	0.00
	CV									0.0	0.0
	Replicate F									0.000	0.000
	Replicate Prob(F)									1.0000	1.0000
	Treatment F									0.000	0.000
	Treatment Prob(F)									1.0000	1.0000

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	DISEASE 6-22-12 Pressure H/M/L/no 0 DA-B	DISEASE 7-13-12 Pressure H/M/L/no 21 DA-B	DISEASE 8-1-12 Pressure H/M/L/no 0 DA-D	DISEASE 8-8-12 Pressure H/M/L/no 7 DA-D	DISEASE 8-22-12 Pressure H/M/L/no 21 DA-D	DISEASE 9-5-12 Pressure H/M/L/no 35 DA-D
1	NK S49-F8 No seed treatment									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
2	NK S49-F8 Cruiser Maxx									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
3	NK S49-F8 Avicta									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
4	NK S46-A1 No seed treatment									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
5	NK S46-A1 Cruiser Maxx									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
6	NK S46-A1 Avicta									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
7	NK S49-F8 No seed treatment									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	DISEASE 6-22-12 Pressure H/M/L/no 0 DA-B	DISEASE 7-13-12 Pressure H/M/L/no 21 DA-B	DISEASE 8-1-12 Pressure H/M/L/no 0 DA-D	DISEASE 8-8-12 Pressure H/M/L/no 7 DA-D	DISEASE 8-22-12 Pressure H/M/L/no 21 DA-D	DISEASE 9-5-12 Pressure H/M/L/no 35 DA-D
8	NK S49-F8 Cruiser Maxx									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
9	NK S49-F8 Avicta									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
10	NK S46-A1 No seed treatment									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
11	NK S46-A1 Cruiser Maxx									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
12	NK S46-A1 Avicta									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D						
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
13	NK S49-F8 No seed treatment									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
14	NK S49-F8 Cruiser Maxx									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
15	NK S49-F8 Avicta									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	DISEASE 6-22-12 Pressure H/M/L/no 0 DA-B	DISEASE 7-13-12 Pressure H/M/L/no 21 DA-B	DISEASE 8-1-12 Pressure H/M/L/no 0 DA-D	DISEASE 8-8-12 Pressure H/M/L/no 7 DA-D	DISEASE 8-22-12 Pressure H/M/L/no 21 DA-D	DISEASE 9-5-12 Pressure H/M/L/no 35 DA-D
16	NK S46-A1 No seed treatment									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
17	NK S46-A1 Cruiser Maxx									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
18	NK S46-A1 Avicta									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
19	NK S49-F8 No seed treatment									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
20	NK S49-F8 Cruiser Maxx									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
21	NK S49-F8 Avicta									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
22	NK S46-A1 No seed treatment									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
23	NK S46-A1 Cruiser Maxx									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	DISEASE	DISEASE	DISEASE	DISEASE	DISEASE	DISEASE
Pest Code										DISEASE	DISEASE	DISEASE	DISEASE	DISEASE	DISEASE
Crop Code															
Rating Date										6-22-12	7-13-12	8-1-12	8-8-12	8-22-12	9-5-12
Rating Type										Pressure	Pressure	Pressure	Pressure	Pressure	Pressure
Rating Unit										H/M/L/no	H/M/L/no	H/M/L/no	H/M/L/no	H/M/L/no	H/M/L/no
Rating Timing															
Trt-Eval Interval										0 DA-B	21 DA-B	0 DA-D	7 DA-D	21 DA-D	35 DA-D
24	NK S46-A1 Avicta									1.0 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A						
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C						
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D						
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D						
LSD (P=.05)										0.00	0.00	0.00	0.00	0.00	0.00
Standard Deviation										0.00	0.00	0.00	0.00	0.00	0.00
CV										0.0	0.0	0.0	0.0	0.0	0.0
Replicate F										0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	DISEASE 9-19-12 Pressure H/M/L/no 49 DA-D	DISEASE 10-1-12 Pressure H/M/L/no 61 DA-D
	Pest Code										
	Crop Code										
	Rating Date									9-19-12	10-1-12
	Rating Type									Pressure	Pressure
	Rating Unit									H/M/L/no	H/M/L/no
	Rating Timing										
	Trt-Eval Interval									49 DA-D	61 DA-D
1	NK S49-F8 No seed treatment									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
2	NK S49-F8 Cruiser Maxx									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
3	NK S49-F8 Avicta									0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
4	NK S46-A1 No seed treatment									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
5	NK S46-A1 Cruiser Maxx									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
6	NK S46-A1 Avicta									0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
7	NK S49-F8 No seed treatment									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	DISEASE 9-19-12 Pressure H/M/L/no 49 DA-D	DISEASE 10-1-12 Pressure H/M/L/no 61 DA-D
8	NK S49-F8 Cruiser Maxx									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
9	NK S49-F8 Avicta									0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
10	NK S46-A1 No seed treatment									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
11	NK S46-A1 Cruiser Maxx									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
12	NK S46-A1 Avicta									0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	ENDIGO ZCX	2.71	ZC	0.085	lb ai/a	4	fl oz/a	R3	D		
	TOP K	100	SL	1	gal/a	1	gal/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
13	NK S49-F8 No seed treatment									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
14	NK S49-F8 Cruiser Maxx									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
15	NK S49-F8 Avicta									0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	DISEASE 9-19-12 Pressure H/M/L/no 49 DA-D	DISEASE 10-1-12 Pressure H/M/L/no 61 DA-D
16	NK S46-A1 No seed treatment									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
17	NK S46-A1 Cruiser Maxx									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
18	NK S46-A1 Avicta									0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
19	NK S49-F8 No seed treatment									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
20	NK S49-F8 Cruiser Maxx									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
21	NK S49-F8 Avicta									0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
22	NK S46-A1 No seed treatment									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
23	NK S46-A1 Cruiser Maxx									0.0 a	0.0 a
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	4-6"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	4-6"W	B		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	DISEASE	DISEASE
	Pest Code									DISEASE	DISEASE
	Crop Code										
	Rating Date									9-19-12	10-1-12
	Rating Type									Pressure	Pressure
	Rating Unit									H/M/L/no	H/M/L/no
	Rating Timing										
	Trt-Eval Interval									49 DA-D	61 DA-D
24	NK S46-A1 Avicta									0.0 a	0.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A		
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	21DA-B	C		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	21DA-B	C		
	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	R3	D		
	WARRIOR II	2.09	CS	0.0245	lb ai/a	1.5	fl oz/a	R3	D		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R3	D		
	LSD (P=.05)									0.00	0.00
	Standard Deviation									0.00	0.00
	CV									0.0	0.0
	Replicate F									0.000	0.000
	Replicate Prob(F)									1.0000	1.0000
	Treatment F									0.000	0.000
	Treatment Prob(F)									1.0000	1.0000

Southern Illinois University

Syngenta ICS Soybean Trial.

Trial ID: 12-WF-SW
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Syngenta (ICS soybean).
2. Ratings: Observe and rate any major differences in weed control at 14-21 DA-B and at the R3 application as H/M/L/none.
   Observe and note weed, insect, and disease pressure at each application timing, record as H/M/L/none.
   Observe and note any disease or insect pressure from R3 to R7 (50% leaves yellow) as H/M/L/none.
3. Yield, test weight, and seed moisture; trim front and back 5 ft of plots prior to harvest, harvest rows 3-6.
4. Planting, six variety/seed treatment combinations, see map for layout.
   Herbicide applications to be made with two passes of a 7.5 ft handheld boom.
5. Photos of significant treatment differences would be appreciated.
6. Insect pressure should be managed by Lorsban or another OP, as to measure the yield benefits of the Plant Performance benefits of Endigo vs Warrior II.
   Lorsban (1 pt/A) was applied to all plots on 7-19-12 to prevent spider mites from spreading into plots.
7. Rainfall following the PRE application was 0.28 inch 6 days later and 0.75 inch 17 days later.
8. H/M/L/no = High (3), Medium (2), Low (1), none (0).
9. Harvested 10-31-12, (4) 30 inch rows by 47 ft.

FMC Residuals Preemergence and Early Postemergence in Soybean.

Trial ID: 12-T1-S100
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-25-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate crop response and residual weed control from FMC products
and competitive products.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 5-25-12
Planting Method: SEEDED Seeded **Rate, Unit:** 75 LB/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 2 Type: W **Code:** PANDI - Panicum dichotomiflorum Michx.
Common Name: panicum, fall

Pest 3 Type: W **Code:** IPOHE - Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 27 FT
Plot Area, Unit: 270 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 100 LB/A

Soil Description

% OM: 1.8 **Texture:** SIL SILT LOAM
pH: 6.6 **Soil Name:** BETHALTO
CEC: 9

Additional Measured Elements

Element	Quantity	Unit
P1	84	LB/A
K	336	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

FMC Residuals Preemergence and Early Postemergence in Soybean.

Trial ID: 12-T1-S100
Location: Belleville Res. Center
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-24-12					7	DAY	42.6	74.3	F
2.	4-29-12	3.06	IN	RAIN	rain					
3.	4-30-12	0.66	IN	RAIN	rain					
4.	5-1-12	0.13	IN	RAIN	rain					
5.	5-1-12					7	DAY	33.5	76	F
6.	5-4-12	0.25	IN	RAIN	rain					
7.	5-7-12	0.29	IN	RAIN	rain					
8.	5-8-12					7	DAY	47.5	87.8	F
9.	5-15-12					7	DAY	37.7	81.3	F
10.	5-21-12	0.18	IN	RAIN	rain					
11.	5-22-12					7	DAY	47.6	82.3	F
12.	5-29-12					7	DAY	48.1	90	F
13.	5-30-12	0.07	IN	RAIN	rain					
14.	5-31-12	0.21	IN	RAIN	rain					
15.	6-5-12					7	DAY	50.2	90.1	F
16.	6-11-12	0.75	IN	RAIN	rain					
17.	6-12-12					7	DAY	52.4	93.6	F
18.	6-17-12	0.36	IN	RAIN	rain					
19.	6-19-12					7	DAY	56.3	94	F
20.	6-26-12					7	DAY	51.8	105.4	F
21.	7-3-12					7	DAY	68.9	104.7	F
22.	7-8-12	0.28	IN	RAIN	rain					
23.	7-10-12					7	DAY	63.4	95	F
24.	7-17-12					7	DAY	61	102.2	F
25.	7-24-12					7	DAY	61	103	F
26.	7-29-12	0.15	IN	RAIN	rain					
27.	7-31-12					7	DAY	60.2	99.1	F
28.	8-5-12	0.18	IN	RAIN	rain					
29.	8-7-12					7	DAY	50.2	99.8	F
30.	8-13-12	0.88	IN	RAIN	rain					
31.	8-14-12					7	DAY	51	95.6	F
32.	8-17-12	1.19	IN	RAIN	rain					
33.	8-21-12					7	DAY	54.7	94.2	F
34.	8-26-12	0.04	IN	RAIN	rain					
35.	8-27-12	1.66	IN	RAIN	rain					
36.	8-31-12	0.11	IN	RAIN	rain					

Application Description

	A	B
Application Date:	5-25-12	6-18-12
Time of Day:	12:00	8:30
Application Method:	Spray	Spray
Application Timing:	PRE	V1-V2
Application Placement:	BROFOL	BROFOL
Applied By:	LAH	RJW
Air Temperature, Unit:	87 F	80 F
% Relative Humidity:	55	67
Wind Velocity, Unit:	2 MPH	6 MPH
Wind Direction:	S	SW
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	69 F	78 F
Soil Moisture:	BELNOR	NORMAL
% Cloud Cover:	10	0
Next Rain Occurred On:	5-31-12	7-8-12

FMC Residuals Preemergence and Early Postemergence in Soybean.

Trial ID: 12-T1-S100
Location: Belleville Res. Center
Investigator: Bryan Young

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	V2
Stage Minimum, Percent:		V1
Stage Maximum, Percent:		V2
Height, Unit:		4 IN
Height Minimum, Maximum:		3 4

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMATA W DESC	AMATA W DESC
Stage Majority, Percent:	NA	NA
Pest 2 Code, Type, Scale:	PANDI W DESC	PANDI W DESC
Stage Majority, Percent:	NA	NA
Pest 3 Code, Type, Scale:	IPOHE W DESC	IPOHE W DESC
Stage Majority, Percent:	NA	Coty
Stage Minimum, Percent:		Coty
Stage Maximum, Percent:		16
Height, Unit:		0.5 IN
Height Minimum, Maximum:		0.5 3
Density, Unit:		5 FT2

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA

FMC Residuals Preemergence and Early Postemergence in Soybean.

Trial ID: 12-T1-S100
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-30-12 Moisture Percent	GLXMA 10-30-12 Test wt. lb/bu	GLXMA 10-30-12 Yield bu/A
1	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	11.6 abc	57.9 a	68 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B			
2	AUTHORITY XL	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	11.4 a-d	58.2 a	60 abc
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B			
3	VALOR XLT	40.3	WG	0.126	lb ai/a	5.0	oz/a	PRE	A	11.3 bcd	58.2 a	65 ab
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B			
4	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	11.7 ab	57.9 a	51 bc
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B			
5	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	11.7 ab	57.9 a	48 c
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B			
6	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	11.4 a-d	58.2 a	61 abc
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B			
7	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	11.1 cd	58.3 a	71 a
	ANTHEM	2.15	SE	0.101	lb ai/a	6	fl oz/a	V1-V2	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B			
8	ANTHEM	2.15	SE	0.118	lb ai/a	7	fl oz/a	V1-V2	B	11.1 d	58.4 a	68 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B			
9	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	V1-V2	B	11.8 a	57.7 a	64 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B			
10	FLEXSTAR GT 3.5	2.82	SL	1.23	lb ae/a	3.5	pt/a	V1-V2	B	11.1 d	58.4 a	68 a
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B			
11	EXTREME	2.17	SL	0.81	lb ai/a	3	pt/a	V1-V2	B	11.2 bcd	58.2 a	69 a
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B			
12	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	V1-V2	B	11.1 cd	58.4 a	71 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B			
13	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	11.0 d	58.4 a	73 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	V1-V2	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B			
14	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	11.2 bcd	58.3 a	64 ab
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE	A			
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B			

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

FMC Residuals Preemergence and Early Postemergence in Soybean.

Trial ID: 12-T1-S100
Location: Belleville Res. Center
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval									GLXMA 10-30-12 Moisture Percent	GLXMA 10-30-12 Test wt. lb/bu	GLXMA 10-30-12 Yield bu/A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
15	NONTREATED									11.4 a-d	58.2 a	54 bc
LSD (P=.05)										0.44	0.45	13.9
Standard Deviation										0.31	0.31	9.7
CV										2.72	0.54	15.26
Replicate F										5.428	4.957	1.342
Replicate Prob(F)										0.0030	0.0049	0.2736
Treatment F										2.356	1.747	2.390
Treatment Prob(F)										0.0163	0.0819	0.0149

FMC Residuals Preemergence and Early Postemergence in Soybean.

Trial ID: 12-T1-S100
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-14-12 Injury Percent 14 DAE 20 DA-A	GLXMA 6-25-12 Injury Percent 7 DA-B 31 DA-A	GLXMA 6-30-12 Injury Percent 30 DAE 36 DA-A	GLXMA 7-9-12 Injury Percent 21 DA-B
1	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	0 a	0 d	0 d	0 d
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B				
2	AUTHORITY XL	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	0 a	0 d	0 d	0 d
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B				
3	VALOR XLT	40.3	WG	0.126	lb ai/a	5.0	oz/a	PRE	A	1 a	1 d	0 d	0 d
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B				
4	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	1 a	0 d	0 d	0 d
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B				
5	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	1 a	0 d	0 d	0 d
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B				
6	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	2 a	0 d	0 d	0 d
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B				
7	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	1 a	5 c	3 c	2 c
	ANTHEM	2.15	SE	0.101	lb ai/a	6	fl oz/a	V1-V2	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B				
8	ANTHEM	2.15	SE	0.118	lb ai/a	7	fl oz/a	V1-V2	B		7 ab	5 b	3 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B				
9	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	V1-V2	B		6 b	5 b	4 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B				
10	FLEXSTAR GT 3.5	2.82	SL	1.23	lb ae/a	3.5	pt/a	V1-V2	B		4 c	2 c	1 d
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B				
11	EXTREME	2.17	SL	0.81	lb ai/a	3	pt/a	V1-V2	B		0 d	0 d	0 d
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B				
12	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	V1-V2	B		0 d	0 d	0 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B				
13	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	0 a	9 a	6 a	4 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	V1-V2	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B				
14	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	0 a	0 d	0 d	0 d
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE	A				
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B				

Southern Illinois University

FMC Residuals Preemergence and Early Postemergence in Soybean.

Trial ID: 12-T1-S100
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
Pest Code													
Crop Code										GLXMA	GLXMA	GLXMA	GLXMA
Rating Date										6-14-12	6-25-12	6-30-12	7-9-12
Rating Type										Injury	Injury	Injury	Injury
Rating Unit										Percent	Percent	Percent	Percent
Rating Timing										14 DAE	7 DA-B	30 DAE	
Trt-Eval Interval										20 DA-A	31 DA-A	36 DA-A	21 DA-B
15	NONTREATED									0 a	0 d	0 d	0 d
LSD (P=.05)										1.6	1.3	0.9	1.0
Standard Deviation										1.1	0.9	0.6	0.7
CV										214.09	45.38	45.0	77.25
Replicate F										2.036	1.070	1.129	0.138
Replicate Prob(F)										0.1356	0.3721	0.3483	0.9368
Treatment F										1.115	44.240	48.948	18.163
Treatment Prob(F)										0.3897	0.0001	0.0001	0.0001

FMC Residuals Preemergence and Early Postemergence in Soybean.

Trial ID: 12-T1-S100
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 6-30-12 Control Percent 30 DAE 36 DA-A	AMATA 7-30-12 Control Percent 60 DAE 66 DA-A	AMATA 8-29-12 Control Percent 90 DAE 96 DA-A	PANDI 6-30-12 Control Percent 30 DAE 36 DA-A	PANDI 7-30-12 Control Percent 60 DAE 66 DA-A	PANDI 8-29-12 Control Percent 90 DAE 96 DA-A
1	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	99 a	99 a	98 a	97 ab	97 ab	94 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B						
2	AUTHORITY XL	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	98 a	98 a	97 a	97 ab	95 ab	91 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B						
3	VALOR XLT	40.3	WG	0.126	lb ai/a	5.0	oz/a	PRE	A	99 a	98 a	97 a	96 abc	88 bcd	83 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B						
4	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	99 a	97 a	93 a	97 ab	97 ab	92 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B						
5	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	99 a	97 a	96 a	97 ab	97 ab	95 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B						
6	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	78 c	66 d	53 d	94 bcd	98 a	95 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B						
7	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	99 a	99 a	97 a	99 a	94 abc	88 a
	ANTHEM	2.15	SE	0.101	lb ai/a	6	fl oz/a	V1-V2	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B						
8	ANTHEM	2.15	SE	0.118	lb ai/a	7	fl oz/a	V1-V2	B	97 ab	85 b	75 b	92 cd	85 cd	80 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B						
9	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	V1-V2	B	94 ab	78 bc	65 bcd	92 d	73 e	58 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B						
10	FLEXSTAR GT 3.5	2.82	SL	1.23	lb ae/a	3.5	pt/a	V1-V2	B	89 b	73 cd	56 cd	94 bcd	80 de	63 bc
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B						
11	EXTREME	2.17	SL	0.81	lb ai/a	3	pt/a	V1-V2	B	93 ab	79 bc	71 bc	95 a-d	83 d	83 a
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B						
12	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	V1-V2	B	98 a	97 a	93 a	96 a-d	81 de	78 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B						
13	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	99 a	98 a	96 a	98 ab	94 abc	92 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	V1-V2	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B						
14	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	99 a	99 a	98 a	96 a-d	94 abc	87 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE	A						
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B						

FMC Residuals Preemergence and Early Postemergence in Soybean.

Trial ID: 12-T1-S100
Location: Belleville Res. Center
Investigator: Bryan Young

Pest Code								AMATA	AMATA	AMATA	PANDI	PANDI	PANDI
Crop Code													
Rating Date								6-30-12	7-30-12	8-29-12	6-30-12	7-30-12	8-29-12
Rating Type								Control	Control	Control	Control	Control	Control
Rating Unit								Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing								30 DAE	60 DAE	90 DAE	30 DAE	60 DAE	90 DAE
Trt-Eval Interval								36 DA-A	66 DA-A	96 DA-A	36 DA-A	66 DA-A	96 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
15	NONTREATED									0 d	0 e	0 e	0 e	0 f	0 d
LSD (P=.05)										8.6	10.6	15.5	4.6	9.7	18.8
Standard Deviation										6.0	7.4	10.9	3.2	6.8	13.2
CV										6.76	8.85	13.75	3.64	8.1	16.8
Replicate F										0.467	0.724	0.988	0.465	2.370	1.383
Replicate Prob(F)										0.7068	0.5435	0.4075	0.7082	0.0841	0.2610
Treatment F										70.666	48.181	25.131	232.983	51.838	13.750
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

FMC Residuals Preemergence and Early Postemergence in Soybean.

Trial ID: 12-T1-S100
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	IPOHE 6-30-12 Control Percent 30 DAE 36 DA-A	IPOHE 7-30-12 Control Percent 60 DAE 66 DA-A	IPOHE 8-29-12 Control Percent 90 DAE 96 DA-A
1	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	81 abc	70 bcd	59 b-e
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B			
2	AUTHORITY XL	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	79 bc	55 def	48 def
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B			
3	VALOR XLT	40.3	WG	0.126	lb ai/a	5.0	oz/a	PRE	A	80 bc	59 def	44 ef
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B			
4	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	45 e	41 ef	13 g
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B			
5	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	60 de	38 f	8 g
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B			
6	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	75 cd	43 ef	23 fg
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B			
7	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	98 a	92 ab	91 a
	ANTHEM	2.15	SE	0.101	lb ai/a	6	fl oz/a	V1-V2	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B			
8	ANTHEM	2.15	SE	0.118	lb ai/a	7	fl oz/a	V1-V2	B	94 ab	94 ab	89 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B			
9	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	V1-V2	B	94 ab	84 abc	78 a-d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B			
10	FLEXSTAR GT 3.5	2.82	SL	1.23	lb ae/a	3.5	pt/a	V1-V2	B	96 ab	90 ab	81 abc
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B			
11	EXTREME	2.17	SL	0.81	lb ai/a	3	pt/a	V1-V2	B	94 ab	94 ab	90 a
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B			
12	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	V1-V2	B	94 ab	96 a	92 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B			
13	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	94 ab	91 ab	92 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	V1-V2	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V1-V2	B			
14	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	85 abc	63 cde	56 cde
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE	A			
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	V1-V2	B			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V1-V2	B			

FMC Residuals Preemergence and Early Postemergence in Soybean.

Trial ID: 12-T1-S100
Location: Belleville Res. Center
Investigator: Bryan Young

Pest Code									IPOHE	IPOHE	IPOHE
Crop Code											
Rating Date									6-30-12	7-30-12	8-29-12
Rating Type									Control	Control	Control
Rating Unit									Percent	Percent	Percent
Rating Timing									30 DAE	60 DAE	90 DAE
Trt-Eval Interval									36 DA-A	66 DA-A	96 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
15	NONTREATED									0 f	0 g	0 g
LSD (P=.05)										17.8	24.8	30.4
Standard Deviation										12.5	17.4	21.2
CV										16.04	25.85	36.98
Replicate F										2.040	4.910	2.013
Replicate Prob(F)										0.1229	0.0052	0.1266
Treatment F										17.480	10.555	10.047
Treatment Prob(F)										0.0001	0.0001	0.0001

Southern Illinois University

FMC Residuals Preemergence and Early Postemergence in Soybean.

Trial ID: 12-T1-S100
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: FMC.
2. Ratings: CI at 14 and 30 DAE; CI at 7 and 21 DA-B.
   WC at 30, 60, and 90 DAE; Evaluations at 30 DAE is targeted to be prior to the B application.
3. Yield.
4. Rainfall following the PRE application was 0.28 inch 6 days later and 0.75 inch 17 days later.
5. Weed emergence at the V1-V2 (B) application was limited to IPOHE due to dry soil conditions.
   The planned weed control rating prior to the B application could not be made due to
   lack of emerged weeds due to dry soil conditions.
6. Harvested 10-30-12, (2) 30 inch rows by 24 ft.

Southern Illinois University

Liberty Link Soybean Product Concepts.

Trial ID: 12-2B-W60
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-22-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate the efficacy of several product concepts with Liberty
in Liberty Link soybean.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: HS 43L12 **Description:** LL
BBCH Scale: BSOY **Planting Date:** 5-22-12
Planting Method: SEEDED Seeded **Rate, Unit:** 75 LB/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMBTR - Ambrosia trifida L.
Common Name: ragweed, giant

Pest 2 Type: W **Code:** IPOSS
Common Name: morningglory, species
Description: Mostly IPOHE, some PHBPU (tall mg.)

Pest 3 Type: W **Code:** GGGAN
Common Name: grasses, annual
Description: Mixture of SETFA and PANDI

Pest 4 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT
Plot Area, Unit: 280 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 1.6 **Texture:** SIL SILT LOAM
pH: 6.8 **Soil Name:** PIERRON
CEC: 8

Additional Measured Elements

Element	Quantity	Unit
P1	77	LB/A
K	252	LB/A

Liberty Link Soybean Product Concepts.

Trial ID: 12-2B-W60
Location: Belleville Res. Center
Investigator: Bryan Young

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-24-12					7	DAY	42.6	74.3	F
2.	4-29-12	3.06	IN	RAIN	rain					
3.	4-30-12	0.66	IN	RAIN	rain					
4.	5-1-12	0.13	IN	RAIN	rain					
5.	5-1-12					7	DAY	33.5	76	F
6.	5-4-12	0.25	IN	RAIN	rain					
7.	5-7-12	0.29	IN	RAIN	rain					
8.	5-8-12					7	DAY	47.5	87.8	F
9.	5-15-12					7	DAY	37.7	81.3	F
10.	5-21-12	0.18	IN	RAIN	rain					
11.	5-22-12					7	DAY	47.6	82.3	F
12.	5-29-12					7	DAY	48.1	90	F
13.	5-30-12	0.07	IN	RAIN	rain					
14.	5-31-12	0.21	IN	RAIN	rain					
15.	6-5-12					7	DAY	50.2	90.1	F
16.	6-11-12	0.75	IN	RAIN	rain					
17.	6-12-12					7	DAY	52.4	93.6	F
18.	6-17-12	0.36	IN	RAIN	rain					
19.	6-19-12					7	DAY	56.3	94	F
20.	6-26-12					7	DAY	51.8	105.4	F
21.	7-3-12					7	DAY	68.9	104.7	F
22.	7-8-12	0.28	IN	RAIN	rain					
23.	7-10-12					7	DAY	63.4	95	F
24.	7-17-12					7	DAY	61	102.2	F
25.	7-24-12					7	DAY	61	103	F
26.	7-29-12	0.15	IN	RAIN	rain					
27.	7-31-12					7	DAY	60.2	99.1	F
28.	8-5-12	0.18	IN	RAIN	rain					
29.	8-7-12					7	DAY	50.2	99.8	F
30.	8-13-12	0.88	IN	RAIN	rain					
31.	8-14-12					7	DAY	51	95.6	F
32.	8-17-12	1.19	IN	RAIN	rain					
33.	8-21-12					7	DAY	54.7	94.2	F
34.	8-26-12	0.04	IN	RAIN	rain					
35.	8-27-12	1.66	IN	RAIN	rain					
36.	8-31-12	0.11	IN	RAIN	rain					

Application Description

	A	B	C	D	E	F	G
Application Date:	5-23-12	6-11-12	6-20-12	6-25-12	6-25-12	7-3-12	7-2-12
Time of Day:	18:30	6:45	7:00	8:15	8:15	10:00	10:00
Application Method:	Spray	Spray	Spray	Spray	Spray	Spray	Spray
Application Timing:	PRE	10-14DAE	V3	12"W	12-16DA-B	3-4"W-IN	5-7DA-D
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	RJW	LAH	RFK	JRK	JRK	TAR	TAR
Air Temperature, Unit:	76 F	74 F	76 F	81 F	81 F	92 F	91 F
% Relative Humidity:	40	94	71	63	63	50	54
Wind Velocity, Unit:	8 MPH	4 MPH	3 MPH	3 MPH	3 MPH	3 MPH	0 MPH
Wind Direction:	S	S	S	NE	NE	W	
Dew Presence (Y/N):	N no	N no	N no	N no	N no	N no	N no
Soil Temperature, Unit:	67 F	73 F	77 F	77 F	77 F	81 F	81 F
Soil Moisture:	BELNOR	BELNOR	NORMAL	NORMAL	NORMAL	BELNOR	BELNOR
% Cloud Cover:	10	50	0	5	5	0	0
Next Rain Occurred On:	5-31-12	6-11-12	7-8-12	7-8-12	7-8-12	7-8-12	7-8-12

Liberty Link Soybean Product Concepts.

Trial ID: 12-2B-W60
Location: Belleville Res. Center
Investigator: Bryan Young

Crop Stage At Each Application

	A	B	C	D	E	F	G
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC	DESC	DESC	DESC	DESC	DESC
Stage Majority, Percent:	NA	V2	V3	V5	V5	V6	V6
Stage Minimum, Percent:		V1	V3	V4	V4	V5	V5
Stage Maximum, Percent:		V2	V3	V5	V5	V6	V6
Height, Unit:		7 IN	9 IN	12 IN	12 IN	12 IN	12 IN
Height Minimum, Maximum:		4 7	6 9	8 12	8 12	10 12	10 12

Pest Stage At Each Application

	A	B	C	D	E	F
Pest 1 Code, Type, Scale:	AMBTR W DESC	AMBTR W DESC	AMBTR W DESC	AMBTR W DESC	AMBTR W DESC	AMBTR W DESC
Stage Majority, Percent:	NA	6	10+	10	10	10+
Stage Minimum, Percent:		4	4	2	2	4
Stage Maximum, Percent:		8	10+	15	15	10+
Height, Unit:		3 IN	6 IN	13 IN	13 IN	4 IN
Height Minimum, Maximum:		2 6	2 8	4 16	4 16	4 6
Density, Unit:		2 FT2	0.5 FT2	0.5 FT2	0.5 FT2	0.001 FT2
Pest 2 Code, Type, Scale:	IPOSS W DESC	IPOSS W DESC	IPOSS W DESC	IPOSS W DESC	IPOSS W DESC	IPOSS W DESC
Stage Majority, Percent:	NA	NA	2	2	6	6
Stage Minimum, Percent:			2	Coty	Coty	4
Stage Maximum, Percent:			8	2	8	8
Height, Unit:			1 IN	1 IN	2 IN	3 IN
Height Minimum, Maximum:			1 4	0.5 1	1 3	1 3
Density, Unit:			4 FT2	0.01 FT2	0.1 FT2	0.001 FT2
Pest 3 Code, Type, Scale:	GGGAN W DESC	GGGAN W DESC	GGGAN W DESC	GGGAN W DESC	GGGAN W DESC	GGGAN W DESC
Stage Majority, Percent:	NA	3	10+	NA	5	NA
Stage Minimum, Percent:		2	2		2	
Stage Maximum, Percent:		6	10+		7	
Height, Unit:		3 IN	10 IN		6 IN	
Height Minimum, Maximum:		0.5 4	3 10		1 8	
Density, Unit:		0.5 FT2	1 FT2		0.3 FT2	
Pest 4 Code, Type, Scale:	AMATA W DESC	AMATA W DESC	AMATA W DESC	AMATA W DESC	AMATA W DESC	AMATA W DESC
Stage Majority, Percent:	NA	4	10+	4	15	NA
Stage Minimum, Percent:		2	10	2	4	
Stage Maximum, Percent:		6	10+	6	20	
Height, Unit:		2 IN	8 IN	2 IN	8 IN	
Height Minimum, Maximum:		0.5 3	4 12	1 3	3 12	
Density, Unit:		0.1 FT2	0.01 FT2	0.01 FT2	0.01 FT2	

Liberty Link Soybean Product Concepts.

Trial ID: 12-2B-W60
Location: Belleville Res. Center
Investigator: Bryan Young

	G
Pest 1 Code, Type, Scale:	AMBTR W DESC
Stage Majority, Percent:	10
Stage Minimum, Percent:	2
Stage Maximum, Percent:	15
Height, Unit:	12 IN
Height Minimum, Maximum:	4 16
Density, Unit:	0.5 FT2
Pest 2 Code, Type, Scale:	IPOSS W DESC
Stage Majority, Percent:	6
Stage Minimum, Percent:	Coty
Stage Maximum, Percent:	8
Height, Unit:	2 IN
Height Minimum, Maximum:	1 3
Density, Unit:	0.1 FT2
Pest 3 Code, Type, Scale:	GGGAN W DESC
Stage Majority, Percent:	5
Stage Minimum, Percent:	2
Stage Maximum, Percent:	7
Height, Unit:	6 IN
Height Minimum, Maximum:	1 8
Density, Unit:	0.3 FT2
Pest 4 Code, Type, Scale:	AMATA W DESC
Stage Majority, Percent:	15
Stage Minimum, Percent:	4
Stage Maximum, Percent:	20
Height, Unit:	8 IN
Height Minimum, Maximum:	3 12
Density, Unit:	0.01 FT2

Application Equipment

	A	B	C	D	E	F
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR	XR	XR	XR
Nozzle Size:	8002	8002	8002	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA	15 GPA	15 GPA

	G
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

Liberty Link Soybean Product Concepts.

Trial ID: 12-2B-W60
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-29-12 Injury Percent 7 DAP	GLXMA 6-5-12 Injury Percent 14 DAP	GLXMA 6-19-12 Injury Percent 28 DAP	GLXMA 7-3-12 Injury Percent 42 DAP	GLXMA 7-17-12 Injury Percent 56 DAP
1	NONTREATED									0 a	0 a	0 c	0 e	0 b
2	AUTHORITY FIRST	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	0 a	0 a	11 ab	0 e	0 b
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	10-14DAE	B					
	DUAL II MAGNUM	7.64	EC	1.27	lb ai/a	21.3	fl oz/a	10-14DAE	B					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	10-14DAE	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-4"W-IN	F					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	3-4"W-IN	F					
3	AUTHORITY FIRST	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	0 a	0 a	10 b	0 e	0 b
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	10-14DAE	B					
	DUAL II MAGNUM	7.64	EC	1.24	lb ai/a	1.3	pt/a	10-14DAE	B					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	10-14DAE	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	12-16DA-B	E					
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	12-16DA-B	E					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	12-16DA-B	E					
4	AUTHORITY FIRST	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	0 a	0 a	0 c	4 d	0 b
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V3	C					
	DUAL II MAGNUM	7.64	EC	1.24	lb ai/a	1.3	pt/a	V3	C					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	V3	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-4"W-IN	F					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	3-4"W-IN	F					
5	AUTHORITY FIRST	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	0 a	0 a	11 a	0 e	0 b
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	10-14DAE	B					
	ZIDUA	85	WG	0.133	lb ai/a	2.5	oz/a	10-14DAE	B					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	10-14DAE	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-4"W-IN	F					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	3-4"W-IN	F					
6	LIBERTY 280	2.34	EC	0.79	lb ai/a	43	fl oz/a	12"W	D				3 d	0 b
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	12"W	D					
	LIBERTY 280	2.34	EC	0.79	lb ai/a	43	fl oz/a	5-7DA-D	G					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	5-7DA-D	G					
7	LIBERTY 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	12"W	D				3 d	0 b
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	12"W	D					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	5-7DA-D	G					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	5-7DA-D	G					
8	LIBERTY 280	2.34	EC	1.59	lb ai/a	87	fl oz/a	12"W	D				6 c	3 a
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	12"W	D					
9	BOUNDARY	6.5	EC	1.63	lb ai/a	2	pt/a	PRE	A	0 a	0 a	0 c	14 a	3 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	V3	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V3	C					
10	FIERCE XLT	55.68	WG	0.104	lb ai/a	3	oz/a	PRE	A	0 a	0 a	0 c	12 b	0 b
	FLEXSTAR	1.88	EC	0.352	lb ai/a	1.5	pt/a	V3	C					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	V3	C					
LSD (P=.05)										0.0	0.0	1.2	1.3	1.4
Standard Deviation										0.0	0.0	0.7	0.8	0.8
CV										0.0	0.0	14.58	18.39	140.44
Replicate F										0.000	0.000	0.000	0.503	1.000
Replicate Prob(F)										1.0000	1.0000	1.0000	0.6129	0.3874
Treatment F										0.000	0.000	220.429	131.453	6.789
Treatment Prob(F)										1.0000	1.0000	0.0001	0.0001	0.0003

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Liberty Link Soybean Product Concepts.

Trial ID: 12-2B-W60
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMBTR 5-29-12 Control Percent 7 DAP	AMBTR 6-5-12 Control Percent 14 DAP	AMBTR 6-19-12 Control Percent 28 DAP	AMBTR 7-3-12 Control Percent 42 DAP	AMBTR 7-17-12 Control Percent 56 DAP
1	NONTREATED									0 a	0 a	0 b	0 e	0 c
2	AUTHORITY FIRST	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	0 a	10 a	98 a	98 ab	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	10-14DAE	B					
	DUAL II MAGNUM	7.64	EC	1.27	lb ai/a	21.3	fl oz/a	10-14DAE	B					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	10-14DAE	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-4"W-IN	F					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	3-4"W-IN	F					
3	AUTHORITY FIRST	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	0 a	10 a	99 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	10-14DAE	B					
	DUAL II MAGNUM	7.64	EC	1.24	lb ai/a	1.3	pt/a	10-14DAE	B					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	10-14DAE	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	12-16DA-B	E					
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	12-16DA-B	E					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	12-16DA-B	E					
4	AUTHORITY FIRST	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	0 a	3 a	3 b	98 ab	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V3	C					
	DUAL II MAGNUM	7.64	EC	1.24	lb ai/a	1.3	pt/a	V3	C					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	V3	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-4"W-IN	F					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	3-4"W-IN	F					
5	AUTHORITY FIRST	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	0 a	7 a	98 a	98 ab	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	10-14DAE	B					
	ZIDUA	85	WG	0.133	lb ai/a	2.5	oz/a	10-14DAE	B					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	10-14DAE	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-4"W-IN	F					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	3-4"W-IN	F					
6	LIBERTY 280	2.34	EC	0.79	lb ai/a	43	fl oz/a	12"W	D				95 bc	99 a
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	12"W	D					
	LIBERTY 280	2.34	EC	0.79	lb ai/a	43	fl oz/a	5-7DA-D	G					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	5-7DA-D	G					
7	LIBERTY 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	12"W	D				93 c	99 a
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	12"W	D					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	5-7DA-D	G					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	5-7DA-D	G					
8	LIBERTY 280	2.34	EC	1.59	lb ai/a	87	fl oz/a	12"W	D				96 abc	99 a
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	12"W	D					
9	BOUNDARY	6.5	EC	1.63	lb ai/a	2	pt/a	PRE	A	0 a	0 a	0 b	89 d	78 b
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	V3	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V3	C					
10	FIERCE XLT	55.68	WG	0.104	lb ai/a	3	oz/a	PRE	A	0 a	0 a	0 b	96 abc	97 a
	FLEXSTAR	1.88	EC	0.352	lb ai/a	1.5	pt/a	V3	C					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	V3	C					
LSD (P=.05)										0.0	11.2	4.1	3.6	8.6
Standard Deviation										0.0	6.3	2.3	2.1	5.0
CV										0.0	146.99	5.41	2.46	5.79
Replicate F										0.000	3.240	0.750	0.185	0.763
Replicate Prob(F)										1.0000	0.0750	0.4933	0.8325	0.4808
Treatment F										0.000	1.600	1535.572	618.141	115.383
Treatment Prob(F)										1.0000	0.2298	0.0001	0.0001	0.0001

Liberty Link Soybean Product Concepts.

Trial ID: 12-2B-W60
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	IPOSS 5-29-12 Control Percent 7 DAP	IPOSS 6-5-12 Control Percent 14 DAP	IPOSS 6-19-12 Control Percent 28 DAP	IPOSS 7-3-12 Control Percent 42 DAP	IPOSS 7-17-12 Control Percent 56 DAP
1	NONTREATED									0 a	0 c	0 c	0 c	0 d
2	AUTHORITY FIRST	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	0 a	13 b	98 a	98 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	10-14DAE	B					
	DUAL II MAGNUM	7.64	EC	1.27	lb ai/a	21.3	fl oz/a	10-14DAE	B					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	10-14DAE	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-4"W-IN	F					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	3-4"W-IN	F					
3	AUTHORITY FIRST	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	0 a	30 a	98 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	10-14DAE	B					
	DUAL II MAGNUM	7.64	EC	1.24	lb ai/a	1.3	pt/a	10-14DAE	B					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	10-14DAE	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	12-16DA-B	E					
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	12-16DA-B	E					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	12-16DA-B	E					
4	AUTHORITY FIRST	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	0 a	20 ab	20 b	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V3	C					
	DUAL II MAGNUM	7.64	EC	1.24	lb ai/a	1.3	pt/a	V3	C					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	V3	C					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-4"W-IN	F					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	3-4"W-IN	F					
5	AUTHORITY FIRST	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	0 a	10 bc	99 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	10-14DAE	B					
	ZIDUA	85	WG	0.133	lb ai/a	2.5	oz/a	10-14DAE	B					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	10-14DAE	B					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-4"W-IN	F					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	3-4"W-IN	F					
6	LIBERTY 280	2.34	EC	0.79	lb ai/a	43	fl oz/a	12"W	D				99 a	99 a
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	12"W	D					
	LIBERTY 280	2.34	EC	0.79	lb ai/a	43	fl oz/a	5-7DA-D	G					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	5-7DA-D	G					
7	LIBERTY 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	12"W	D				98 a	99 a
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	12"W	D					
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	5-7DA-D	G					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	5-7DA-D	G					
8	LIBERTY 280	2.34	EC	1.59	lb ai/a	87	fl oz/a	12"W	D				98 a	99 a
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	12"W	D					
9	BOUNDARY	6.5	EC	1.63	lb ai/a	2	pt/a	PRE	A	0 a	0 c	0 c	85 b	95 c
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	V3	C					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V3	C					
10	FIERCE XLT	55.68	WG	0.104	lb ai/a	3	oz/a	PRE	A	0 a	17 b	7 c	96 a	97 b
	FLEXSTAR	1.88	EC	0.352	lb ai/a	1.5	pt/a	V3	C					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C					
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	V3	C					
LSD (P=.05)										0.0	10.5	8.3	3.3	1.1
Standard Deviation										0.0	5.9	4.7	1.9	0.6
CV										0.0	45.96	10.11	2.18	0.71
Replicate F										0.000	1.636	0.272	1.082	1.000
Replicate Prob(F)										1.0000	0.2353	0.7662	0.3599	0.3874
Treatment F										0.000	10.000	339.943	794.801	7265.417
Treatment Prob(F)										1.0000	0.0004	0.0001	0.0001	0.0001

Liberty Link Soybean Product Concepts.

Trial ID: 12-2B-W60
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GGGAN	GGGAN	GGGAN	AMATA	AMATA	AMATA
	Pest Code									GGGAN	GGGAN	GGGAN	AMATA	AMATA	AMATA
	Crop Code														
	Rating Date									6-19-12	7-3-12	7-17-12	6-19-12	7-3-12	7-17-12
	Rating Type									Control	Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
	Rating Timing														
	Trt-Eval Interval									28 DAP	42 DAP	56 DAP	28 DAP	42 DAP	56 DAP
1	NONTREATED									0 d	0 e	0 e	0 b	0 c	0 b
2	AUTHORITY FIRST	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	98 a	98 a	99 a	98 a	98 a	98 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	10-14DAE	B						
	DUAL II MAGNUM	7.64	EC	1.27	lb ai/a	21.3	fl oz/a	10-14DAE	B						
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	10-14DAE	B						
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-4"W-IN	F						
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	3-4"W-IN	F						
3	AUTHORITY FIRST	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	98 a	99 a	99 a	98 a	99 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	10-14DAE	B						
	DUAL II MAGNUM	7.64	EC	1.24	lb ai/a	1.3	pt/a	10-14DAE	B						
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	10-14DAE	B						
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	12-16DA-B	E						
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	12-16DA-B	E						
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	12-16DA-B	E						
4	AUTHORITY FIRST	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	23 b	98 a	99 a	7 b	98 a	99 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V3	C						
	DUAL II MAGNUM	7.64	EC	1.24	lb ai/a	1.3	pt/a	V3	C						
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	V3	C						
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-4"W-IN	F						
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	3-4"W-IN	F						
5	AUTHORITY FIRST	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	98 a	98 a	99 a	99 a	97 a	98 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	10-14DAE	B						
	ZIDUA	85	WG	0.133	lb ai/a	2.5	oz/a	10-14DAE	B						
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	10-14DAE	B						
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-4"W-IN	F						
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	3-4"W-IN	F						
6	LIBERTY 280	2.34	EC	0.79	lb ai/a	43	fl oz/a	12"W	D		83 c	99 a		93 b	99 a
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	12"W	D						
	LIBERTY 280	2.34	EC	0.79	lb ai/a	43	fl oz/a	5-7DA-D	G						
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	5-7DA-D	G						
7	LIBERTY 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	12"W	D		82 c	99 a		92 b	99 a
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	12"W	D						
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	5-7DA-D	G						
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	5-7DA-D	G						
8	LIBERTY 280	2.34	EC	1.59	lb ai/a	87	fl oz/a	12"W	D		89 b	98 b		93 b	98 a
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	12"W	D						
9	BOUNDARY	6.5	EC	1.63	lb ai/a	2	pt/a	PRE	A	7 cd	23 d	60 d	0 b	99 a	99 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	V3	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V3	C						
10	FIERCE XLT	55.68	WG	0.104	lb ai/a	3	oz/a	PRE	A	13 c	27 d	70 c	0 b	98 a	98 a
	FLEXSTAR	1.88	EC	0.352	lb ai/a	1.5	pt/a	V3	C						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V3	C						
	N-PAK AMS	3.4	SL	1.5	lb ai/a	1.5	lb ai/a	V3	C						
	LSD (P=.05)									8.9	5.1	0.6	7.8	2.9	2.3
	Standard Deviation									5.0	3.0	0.4	4.4	1.7	1.3
	CV									10.39	4.27	0.44	10.22	1.96	1.52
	Replicate F									2.280	1.526	1.000	1.011	1.943	0.512
	Replicate Prob(F)									0.1448	0.2443	0.3874	0.3927	0.1757	0.6077
	Treatment F									265.790	482.878	23327.918	413.812	967.491	1597.335
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Liberty Link Soybean Product Concepts.

Trial ID: 12-2B-W60
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Bayer (MRA).
2. Ratings: CI/WC at 7, 14, 28, 42, and 56 DAP.
3. GGGAN = Annual grasses including SETFA (giant foxtail) and PANDI (fall panicum).
   IPOSS = Morningglory species including IPOHE (ivyleaf morningglory) and PHBPU (tall morningglory).
4. For weed control ratings at 7 DAP weed pressure was light and variable.
5. Rainfall following the PRE application was 0.28 inch 8 days later and 0.75 inch 19 days later.
   Rainfall following the 10-14DAE application was 0.75 inch on the same day, 4 hours after application,
   0.36 inch 6 days later, and 0.28 inch 27 days later.
6. Not harvested.

Southern Illinois University

Fierce and Fierce XLT Evaluation in Soybean.

Trial ID: 12-51W-M80
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-22-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate crop tolerance and weed control from preemergence applications of Valor XLT, Fierce, and Fierce XLT in soybean.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 5-22-12
Planting Method: SEEDED Seeded **Rate, Unit:** 75 LB/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMBTR - Ambrosia trifida L.
Common Name: ragweed, giant

Pest 2 Type: W **Code:** IPOHE - Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Pest 3 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 27 FT
Plot Area, Unit: 270 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 1.8 **Texture:** SIL SILT LOAM
pH: 6.5 **Soil Name:** PIERRON
CEC: 10

Additional Measured Elements

Element	Quantity	Unit
P1	56	LB/A
K	294	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Southern Illinois University

Fierce and Fierce XLT Evaluation in Soybean.

Trial ID: 12-51W-M80
Location: Belleville Res. Center
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-24-12					7	DAY	42.6	74.3	F
2.	4-29-12	3.06	IN	RAIN	rain					
3.	4-30-12	0.66	IN	RAIN	rain					
4.	5-1-12	0.13	IN	RAIN	rain					
5.	5-1-12					7	DAY	33.5	76	F
6.	5-4-12	0.25	IN	RAIN	rain					
7.	5-7-12	0.29	IN	RAIN	rain					
8.	5-8-12					7	DAY	47.5	87.8	F
9.	5-15-12					7	DAY	37.7	81.3	F
10.	5-21-12	0.18	IN	RAIN	rain					
11.	5-22-12					7	DAY	47.6	82.3	F
12.	5-29-12					7	DAY	48.1	90	F
13.	5-30-12	0.07	IN	RAIN	rain					
14.	5-31-12	0.21	IN	RAIN	rain					
15.	6-5-12					7	DAY	50.2	90.1	F
16.	6-11-12	0.75	IN	RAIN	rain					
17.	6-12-12					7	DAY	52.4	93.6	F
18.	6-17-12	0.36	IN	RAIN	rain					
19.	6-19-12					7	DAY	56.3	94	F
20.	6-26-12					7	DAY	51.8	105.4	F
21.	7-3-12					7	DAY	68.9	104.7	F
22.	7-8-12	0.28	IN	RAIN	rain					
23.	7-10-12					7	DAY	63.4	95	F
24.	7-17-12					7	DAY	61	102.2	F
25.	7-24-12					7	DAY	61	103	F
26.	7-29-12	0.15	IN	RAIN	rain					
27.	7-31-12					7	DAY	60.2	99.1	F
28.	8-5-12	0.18	IN	RAIN	rain					
29.	8-7-12					7	DAY	50.2	99.8	F
30.	8-13-12	0.88	IN	RAIN	rain					
31.	8-14-12					7	DAY	51	95.6	F
32.	8-17-12	1.19	IN	RAIN	rain					
33.	8-21-12					7	DAY	54.7	94.2	F
34.	8-26-12	0.04	IN	RAIN	rain					
35.	8-27-12	1.66	IN	RAIN	rain					
36.	8-31-12	0.11	IN	RAIN	rain					

Application Description

	A
Application Date:	5-24-12
Time of Day:	6:00
Application Method:	Spray
Application Timing:	PRE
Application Placement:	BROFOL
Applied By:	RJW
Air Temperature, Unit:	62 F
% Relative Humidity:	78
Wind Velocity, Unit:	6 MPH
Wind Direction:	S
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	69 F
Soil Moisture:	BELNOR
% Cloud Cover:	30
Next Rain Occurred On:	5-31-12

Fierce and Fierce XLT Evaluation in Soybean.

Trial ID: 12-51W-M80
Location: Belleville Res. Center
Investigator: Bryan Young

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMBTR W DESC
Stage Majority, Percent:	NA
Pest 2 Code, Type, Scale:	IPOHE W DESC
Stage Majority, Percent:	NA
Pest 3 Code, Type, Scale:	AMATA W DESC
Stage Majority, Percent:	NA

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

Fierce and Fierce XLT Evaluation in Soybean.

Trial ID: 12-51W-M80
Location: Belleville Res. Center
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval									GLXMA 10-22-12 Moisture Percent 151 DA-A	GLXMA 10-22-12 Test wt. lb/bu 150 DA-A	GLXMA 10-22-12 Yield bu/A 150 DA-A	GLXMA 6-21-12 Injury Percent 28 DA-A	GLXMA 7-5-12 Injury Percent 42 DA-A	GLXMA 7-19-12 Injury Percent 56 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1	NONTREATED									14.5 a	56.0 a	55 c	0 a	0 a	0 a
2	VALOR SX	51 WG		0.096	lb ai/a	3 oz/a		PRE	A	14.0 a	56.2 a	76 ab	0 a	0 a	0 a
3	VALOR XLT	40.3 WG		0.0756	lb ai/a	3 oz/a		PRE	A	14.1 a	56.2 a	71 ab	0 a	0 a	0 a
4	VALOR XLT	40.3 WG		0.101	lb ai/a	4 oz/a		PRE	A	13.8 a	56.3 a	74 ab	0 a	0 a	0 a
5	FIERCE	76 WG		0.143	lb ai/a	3 oz/a		PRE	A	13.9 a	56.3 a	69 ab	0 a	0 a	0 a
6	FIERCE	76 WG		0.178	lb ai/a	3.75 oz/a		PRE	A	13.9 a	56.3 a	73 ab	0 a	0 a	0 a
7	FIERCE	76 WG		0.214	lb ai/a	4.5 oz/a		PRE	A	13.7 a	56.3 a	74 ab	0 a	0 a	0 a
8	FIERCE XLT	55.68 WG		0.139	lb ai/a	4 oz/a		PRE	A	13.5 a	56.5 a	71 ab	0 a	0 a	0 a
9	FIERCE XLT	55.68 WG		0.174	lb ai/a	5 oz/a		PRE	A	14.3 a	56.2 a	71 ab	0 a	0 a	0 a
10	FIERCE XLT	55.68 WG		0.209	lb ai/a	6 oz/a		PRE	A	13.7 a	56.3 a	72 ab	0 a	0 a	0 a
11	GANGSTER (CO-PACK)					3.6 oz/a		PRE	A	13.9 a	56.3 a	78 a	0 a	0 a	0 a
	GANGSTER FR	84 WG		0.0315	lb ai/a			PRE	A						
	GANGSTER V	51 WG		0.096	lb ai/a			PRE	A						
12	AUTHORITY XL	70 WG		0.175	lb ai/a	4 oz/a		PRE	A	14.0 a	56.2 a	74 ab	0 a	0 a	0 a
13	AUTHORITY FIRST	70 WG		0.282	lb ai/a	6.45 oz/a		PRE	A	14.2 a	56.1 a	67 b	0 a	0 a	0 a
14	OPTILL PRO (CO-PACK)							PRE	A	14.0 a	56.3 a	74 ab	0 a	0 a	0 a
	OPTILL	68 WG		0.085	lb ai/a	2 oz/a		PRE	A						
	OUTLOOK	6 EC		0.47	lb ai/a	10 fl oz/a		PRE	A						
15	ANTHEM	2.15 SE		0.134	lb ai/a	8 fl oz/a		PRE	A	14.0 a	56.2 a	69 b	0 a	0 a	0 a
LSD (P=.05)										0.96	0.34	9.0	0.0	0.0	0.0
Standard Deviation										0.57	0.20	5.4	0.0	0.0	0.0
CV										4.11	0.36	7.59	0.0	0.0	0.0
Replicate F										0.064	0.157	0.383	0.000	0.000	0.000
Replicate Prob(F)										0.9386	0.8552	0.6855	1.0000	1.0000	1.0000
Treatment F										0.634	0.811	2.935	0.000	0.000	0.000
Treatment Prob(F)										0.8139	0.6521	0.0074	1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Fierce and Fierce XLT Evaluation in Soybean.

Trial ID: 12-51W-M80
Location: Belleville Res. Center
Investigator: Bryan Young

Pest Code								AMBTR	AMBTR	AMBTR	IPOHE	IPOHE	IPOHE
Crop Code													
Rating Date								6-21-12	7-5-12	7-19-12	6-21-12	7-5-12	7-19-12
Rating Type								Control	Control	Control	Control	Control	Control
Rating Unit								Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing													
Trt-Eval Interval								28 DA-A	42 DA-A	56 DA-A	28 DA-A	42 DA-A	56 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	NONTREATED									0 g	0 f	0 e	0 e	0 f	0 e
2	VALOR SX	51	WG	0.096	lb ai/a	3	oz/a	PRE	A	20 def	23 bcd	20 bcd	30 cd	32 cde	37 a-d
3	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	23 cde	13 c-f	3 de	32 cd	20 ef	17 de
4	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	PRE	A	35 abc	25 bc	15 b-e	47 bc	37 b-e	33 a-d
5	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	7 fg	7 ef	3 de	30 cd	23 de	23 cd
6	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	PRE	A	28 bcd	30 ab	25 abc	43 bcd	27 cde	17 de
7	FIERCE	76	WG	0.214	lb ai/a	4.5	oz/a	PRE	A	30 a-d	25 bc	15 b-e	60 ab	37 b-e	27 cd
8	FIERCE XLT	55.68	WG	0.139	lb ai/a	4	oz/a	PRE	A	32 a-d	27 abc	30 ab	53 b	37 b-e	30 bcd
9	FIERCE XLT	55.68	WG	0.174	lb ai/a	5	oz/a	PRE	A	35 abc	20 b-e	20 bcd	48 bc	47 abc	40 abc
10	FIERCE XLT	55.68	WG	0.209	lb ai/a	6	oz/a	PRE	A	40 ab	40 a	40 a	75 a	58 ab	53 a
11	GANGSTER (CO-PACK)					3.6	oz/a	PRE	A	43 a	30 ab	30 ab	75 a	63 a	50 ab
	GANGSTER FR	84	WG	0.0315	lb ai/a			PRE	A						
	GANGSTER V	51	WG	0.096	lb ai/a			PRE	A						
12	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	35 abc	30 ab	30 ab	40 bcd	43 a-d	45 abc
13	AUTHORITY FIRST	70	WG	0.282	lb ai/a	6.45	oz/a	PRE	A	30 a-d	10 def	10 cde	60 ab	47 abc	30 bcd
14	OPTILL PRO (CO-PACK)							PRE	A	13 efg	13 c-f	20 bcd	23 d	20 ef	17 de
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A						
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A						
15	ANTHEM	2.15	SE	0.134	lb ai/a	8	fl oz/a	PRE	A	0 g	0 f	0 e	0 e	0 f	0 e
LSD (P=.05)										14.1	14.4	17.1	20.5	22.4	23.1
Standard Deviation										8.3	8.5	10.0	12.3	13.4	13.8
CV										33.45	43.22	57.55	29.83	41.08	49.56
Replicate F										0.220	0.031	3.313	0.956	2.193	4.016
Replicate Prob(F)										0.8042	0.9694	0.0572	0.3964	0.1304	0.0293
Treatment F										8.436	5.906	4.535	10.372	5.630	4.091
Treatment Prob(F)										0.0001	0.0002	0.0012	0.0001	0.0001	0.0007

Fierce and Fierce XLT Evaluation in Soybean.

Trial ID: 12-51W-M80
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 6-21-12 Control Percent 28 DA-A	AMATA 7-5-12 Control Percent 42 DA-A	AMATA 7-19-12 Control Percent 56 DA-A
1	NONTREATED									0 c	0 d	0 e
2	VALOR SX	51	WG	0.096	lb ai/a	3	oz/a	PRE	A	98 a	98 a	96 ab
3	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	99 a	97 ab	96 ab
4	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	PRE	A	93 ab	91 ab	90 abc
5	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	99 a	98 a	95 ab
6	FIERCE	76	WG	0.178	lb ai/a	3.75	oz/a	PRE	A	99 a	99 a	99 a
7	FIERCE	76	WG	0.214	lb ai/a	4.5	oz/a	PRE	A	99 a	98 a	99 a
8	FIERCE XLT	55.68	WG	0.139	lb ai/a	4	oz/a	PRE	A	99 a	97 ab	91 abc
9	FIERCE XLT	55.68	WG	0.174	lb ai/a	5	oz/a	PRE	A	99 a	97 ab	93 ab
10	FIERCE XLT	55.68	WG	0.209	lb ai/a	6	oz/a	PRE	A	99 a	99 a	99 a
11	GANGSTER (CO-PACK)					3.6	oz/a	PRE	A	99 a	99 a	99 a
	GANGSTER FR	84	WG	0.0315	lb ai/a			PRE	A			
	GANGSTER V	51	WG	0.096	lb ai/a			PRE	A			
12	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	99 a	95 ab	85 abc
13	AUTHORITY FIRST	70	WG	0.282	lb ai/a	6.45	oz/a	PRE	A	88 b	86 bc	73 cd
14	OPTILL PRO (CO-PACK)							PRE	A	96 ab	88 abc	80 bcd
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A			
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A			
15	ANTHEM	2.15	SE	0.134	lb ai/a	8	fl oz/a	PRE	A	87 b	78 c	63 d
LSD (P=.05)										10.4	11.3	18.7
Standard Deviation										6.2	6.8	11.2
CV										6.88	7.7	13.31
Replicate F										1.378	2.875	2.952
Replicate Prob(F)										0.2686	0.0732	0.0686
Treatment F										49.835	41.032	15.647
Treatment Prob(F)										0.0001	0.0001	0.0001

Southern Illinois University

Fierce and Fierce XLT Evaluation in Soybean.

Trial ID: 12-51W-M80
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Valent (Fierce MD 64.01).
2. Ratings: CI/WC at 28, 42, and 56 DAT.
3. Blanket application of glyphosate at 56 DAT.
4. Yield.
5. Rainfall following the PRE application was 0.28 inch 7 days later and 0.75 inch 18 days later.
6. Harvested 10-22-12, (2) 30 inch rows by 24 ft.

Alert Preemergence in Soybean.

Trial ID: 12-22-S80
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-19-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Determine the spectrum of weed control with tank-mixtures of Alert plus Dawn applied preemergence in soybean.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 5-19-12
Planting Method: SEEDED Seeded **Rate, Unit:** 75 LB/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** SETFA - Setaria faberi Herrm.
Common Name: foxtail, giant

Pest 2 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 3 Type: W **Code:** CHEAL - Chenopodium album L.
Common Name: lambsquarters, common

Pest 4 Type: W **Code:** IPOHE - Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Pest 5 Type: W **Code:** ABUTH - Abutilon theophrasti Medik.
Common Name: velvetleaf

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 26 FT
Plot Area, Unit: 260 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 100 LB/A

Soil Description

% OM: 2.1 **Texture:** SIL SILT LOAM
pH: 6.5 **Soil Name:** CASEYVILLE
CEC: 8

Additional Measured Elements

Element	Quantity	Unit
P1	80	LB/A
K	369	LB/A

Alert Preemergence in Soybean.

Trial ID: 12-22-S80
Location: Belleville Res. Center
Investigator: Bryan Young

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Application Description

	A
Application Date:	5-19-12
Time of Day:	17:00
Application Method:	Spray
Application Timing:	PRE
Application Placement:	BROSOI
Applied By:	RJW
Air Temperature, Unit:	86 F
% Relative Humidity:	40
Wind Velocity, Unit:	8 MPH
Wind Direction:	S
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	63 F
Soil Moisture:	BELNOR
% Cloud Cover:	40
Next Rain Occurred On:	5-21-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	SETFA W DESC
Stage Majority, Percent:	NA
Pest 2 Code, Type, Scale:	AMATA W DESC
Stage Majority, Percent:	NA
Pest 3 Code, Type, Scale:	CHEAL W DESC
Stage Majority, Percent:	NA
Pest 4 Code, Type, Scale:	IPOHE W DESC
Stage Majority, Percent:	NA
Pest 5 Code, Type, Scale:	ABUTH W DESC
Stage Majority, Percent:	NA

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

Alert Preemergence in Soybean.

Trial ID: 12-22-S80
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-26-12 Chlorosis Percent 7 DA-A	GLXMA 6-2-12 Chlorosis Percent 14 DA-A	GLXMA 6-16-12 Chlorosis Percent 28 DA-A	GLXMA 5-26-12 Necrosis Percent 7 DA-A	GLXMA 6-2-12 Necrosis Percent 14 DA-A	GLXMA 6-16-12 Necrosis Percent 28 DA-A
1	ALERT	3	ME	0.50	lb ai/a	21.3	floz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
2	ALERT	3	ME	0.75	lb ai/a	32	floz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
3	ALERT	3	ME	1.0	lb ai/a	42.7	floz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
4	ALERT	3	ME	0.50	lb ai/a	21.3	floz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
	DAWN	2	AS	0.375	lb ai/a	24	floz/a	PRE	A						
5	ALERT	3	ME	0.75	lb ai/a	32	floz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
	DAWN	2	AS	0.375	lb ai/a	24	floz/a	PRE	A						
6	DUAL II MAGNUM	7.64	EC	1.0	lb ai/a	16.8	floz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
7	PREFIX	5.29	EC	1.32	lb ai/a	32	floz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
8	NONTREATED									0 a	0 a	0 a	0 a	0 a	0 a
LSD (P=.05)										0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation										0.0	0.0	0.0	0.0	0.0	0.0
CV										0.0	0.0	0.0	0.0	0.0	0.0
Replicate F										0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Alert Preemergence in Soybean.

Trial ID: 12-22-S80
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-26-12 Stunt Percent 7 DA-A	GLXMA 6-2-12 Stunt Percent 14 DA-A	GLXMA 6-16-12 Stunt Percent 28 DA-A	GLXMA 5-26-12 Injury Percent 7 DA-A	GLXMA 6-2-12 Injury Percent 14 DA-A	GLXMA 6-16-12 Injury Percent 28 DA-A
1	ALERT	3	ME	0.50	lb ai/a	21.3	floz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
2	ALERT	3	ME	0.75	lb ai/a	32	floz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
3	ALERT	3	ME	1.0	lb ai/a	42.7	floz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
4	ALERT	3	ME	0.50	lb ai/a	21.3	floz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
	DAWN	2	AS	0.375	lb ai/a	24	floz/a	PRE	A						
5	ALERT	3	ME	0.75	lb ai/a	32	floz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
	DAWN	2	AS	0.375	lb ai/a	24	floz/a	PRE	A						
6	DUAL II MAGNUM	7.64	EC	1.0	lb ai/a	16.8	floz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
7	PREFIX	5.29	EC	1.32	lb ai/a	32	floz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
8	NONTREATED									0 a	0 a	0 a	0 a	0 a	0 a
LSD (P=.05)										0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation										0.0	0.0	0.0	0.0	0.0	0.0
CV										0.0	0.0	0.0	0.0	0.0	0.0
Replicate F										0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Alert Preemergence in Soybean.

Trial ID: 12-22-S80
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	SETFA 6-9-12 Control Percent 21 DA-A	SETFA 6-23-12 Control Percent 35 DA-A	SETFA 7-7-12 Control Percent 49 DA-A	AMATA 6-9-12 Control Percent 21 DA-A	AMATA 6-23-12 Control Percent 35 DA-A	AMATA 7-7-12 Control Percent 49 DA-A
1	ALERT	3	ME	0.50	lb ai/a	21.3	floz/a	PRE	A	50 cd	38 b	30 c	30 c	8 cd	3 c
2	ALERT	3	ME	0.75	lb ai/a	32	floz/a	PRE	A	65 bc	73 a	63 b	56 b	15 bcd	13 bc
3	ALERT	3	ME	1.0	lb ai/a	42.7	floz/a	PRE	A	90 a	90 a	84 a	80 a	5 cd	3 c
4	ALERT	3	ME	0.50	lb ai/a	21.3	floz/a	PRE	A	80 ab	76 a	61 b	60 b	33 a	31 a
	DAWN	2	AS	0.375	lb ai/a	24	floz/a	PRE	A						
5	ALERT	3	ME	0.75	lb ai/a	32	floz/a	PRE	A	83 a	81 a	70 ab	58 b	31 a	27 a
	DAWN	2	AS	0.375	lb ai/a	24	floz/a	PRE	A						
6	DUAL II MAGNUM	7.64	EC	1.0	lb ai/a	16.8	floz/a	PRE	A	40 d	23 b	18 c	28 c	18 abc	23 ab
7	PREFIX	5.29	EC	1.32	lb ai/a	32	floz/a	PRE	A	58 c	40 b	31 c	38 c	24 ab	23 ab
8	NONTREATED									0 e	0 c	0 d	0 d	0 d	0 c
LSD (P=.05)										16.5	19.4	17.4	16.6	15.7	13.8
Standard Deviation										11.2	13.2	11.8	11.3	10.7	9.4
CV										19.28	25.11	26.52	25.85	64.5	62.28
Replicate F										4.280	2.038	4.009	1.909	0.046	0.776
Replicate Prob(F)										0.0166	0.1394	0.0211	0.1590	0.9867	0.5202
Treatment F										26.886	23.784	24.134	19.485	5.081	6.881
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0017	0.0003

Alert Preemergence in Soybean.

Trial ID: 12-22-S80
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	CHEAL 6-9-12 Control Percent 21 DA-A	CHEAL 6-23-12 Control Percent 35 DA-A	CHEAL 7-7-12 Control Percent 49 DA-A	IPOHE 6-9-12 Control Percent 21 DA-A	IPOHE 6-23-12 Control Percent 35 DA-A	IPOHE 7-7-12 Control Percent 49 DA-A
1	ALERT	3	ME	0.50	lb ai/a	21.3	floz/a	PRE	A	10 c	23 c	23 b	0 a	0 a	0 a
2	ALERT	3	ME	0.75	lb ai/a	32	floz/a	PRE	A	93 a	82 ab	76 a	0 a	0 a	0 a
3	ALERT	3	ME	1.0	lb ai/a	42.7	floz/a	PRE	A	99 a	97 a	88 a	5 a	3 a	3 a
4	ALERT	3	ME	0.50	lb ai/a	21.3	floz/a	PRE	A	95 a	84 ab	70 a	3 a	0 a	0 a
	DAWN	2	AS	0.375	lb ai/a	24	floz/a	PRE	A						
5	ALERT	3	ME	0.75	lb ai/a	32	floz/a	PRE	A	99 a	78 b	68 a	0 a	0 a	0 a
	DAWN	2	AS	0.375	lb ai/a	24	floz/a	PRE	A						
6	DUAL II MAGNUM	7.64	EC	1.0	lb ai/a	16.8	floz/a	PRE	A	13 c	20 c	29 b	3 a	0 a	0 a
7	PREFIX	5.29	EC	1.32	lb ai/a	32	floz/a	PRE	A	43 b	25 c	25 b	0 a	0 a	0 a
8	NONTREATED									0 c	0 d	0 c	0 a	0 a	0 a
LSD (P=.05)										13.7	19.2	21.0	5.1	2.6	2.6
Standard Deviation										9.1	13.1	14.3	3.5	1.8	1.8
CV										16.1	25.63	30.27	276.03	565.69	565.69
Replicate F										0.799	1.244	0.781	0.000	1.000	1.000
Replicate Prob(F)										0.5135	0.3188	0.5177	1.0000	0.4123	0.4123
Treatment F										95.618	33.172	19.805	1.200	1.000	1.000
Treatment Prob(F)										0.0001	0.0001	0.0001	0.3454	0.4586	0.4586

Alert Preemergence in Soybean.

Trial ID: 12-22-S80
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ABUTH	ABUTH	ABUTH
	Pest Code									ABUTH	ABUTH	ABUTH
	Crop Code											
	Rating Date									6-9-12	6-23-12	7-7-12
	Rating Type									Control	Control	Control
	Rating Unit									Percent	Percent	Percent
	Rating Timing											
	Trt-Eval Interval									21 DA-A	35 DA-A	49 DA-A
1	ALERT	3	ME	0.50	lb ai/a	21.3	floz/a	PRE	A	40 b	33 c	53 bc
2	ALERT	3	ME	0.75	lb ai/a	32	floz/a	PRE	A	53 ab	73 ab	82 ab
3	ALERT	3	ME	1.0	lb ai/a	42.7	floz/a	PRE	A	60 a	87 a	98 a
4	ALERT	3	ME	0.50	lb ai/a	21.3	floz/a	PRE	A	50 ab	70 b	95 a
	DAWN	2	AS	0.375	lb ai/a	24	floz/a	PRE	A			
5	ALERT	3	ME	0.75	lb ai/a	32	floz/a	PRE	A	57 a	80 ab	75 ab
	DAWN	2	AS	0.375	lb ai/a	24	floz/a	PRE	A			
6	DUAL II MAGNUM	7.64	EC	1.0	lb ai/a	16.8	floz/a	PRE	A	23 c	23 c	24 cd
7	PREFIX	5.29	EC	1.32	lb ai/a	32	floz/a	PRE	A	7 d	5 d	10 d
8	NONTREATED									0 d	0 d	0 d
	LSD (P=.05)									16.4	15.4	31.4
	Standard Deviation									10.4	10.1	20.7
	CV									28.68	21.67	37.96
	Replicate F									0.574	0.327	0.240
	Replicate Prob(F)									0.6449	0.8061	0.8670
	Treatment F									20.265	48.509	14.070
	Treatment Prob(F)									0.0001	0.0001	0.0001

Southern Illinois University

Alert Preemergence in Soybean.

Trial ID: 12-22-S80
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Cheminova (HGLXMACLOM1201).
2. Ratings: CI at 7, 14, and 28 DAT, rate CI overall/chlorosis/necrosis/stunting.
   WC at 21, 35, and 49 DAT.
3. Yield.
4. Rainfall following the PRE application was 0.18 inch 2 days later, 0.28 inch 12 days later
   and 0.75 inch 23 days later.
5. Not harvested, too weedy.

Southern Illinois University

Liberty Herbicide Tolerance and Yield Implications in Liberty Link Soybean.

Trial ID: 12-2B-E95
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-22-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate soybean response to Liberty applied at two rates, three application timings and in sequential applications under weedfree conditions.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: HS 43L12 **Description:** LL
BBCH Scale: BSOY **Planting Date:** 5-22-12
Planting Method: SEEDED Seeded **Rate, Unit:** 75 LB/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** NA
Common Name: crop tolerance only

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT
Plot Area, Unit: 280 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 1.6 **Texture:** SIL SILT LOAM
pH: 6.8 **Soil Name:** PIERRON
CEC: 8

Additional Measured Elements

Element	Quantity	Unit
P1	77	LB/A
K	252	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Liberty Herbicide Tolerance and Yield Implications in Liberty Link Soybean.

Trial ID: 12-2B-E95
Location: Belleville Res. Center
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-24-12					7	DAY	42.6	74.3	F
2.	4-29-12	3.06	IN	RAIN	rain					
3.	4-30-12	0.66	IN	RAIN	rain					
4.	5-1-12	0.13	IN	RAIN	rain					
5.	5-1-12					7	DAY	33.5	76	F
6.	5-4-12	0.25	IN	RAIN	rain					
7.	5-7-12	0.29	IN	RAIN	rain					
8.	5-8-12					7	DAY	47.5	87.8	F
9.	5-15-12					7	DAY	37.7	81.3	F
10.	5-21-12	0.18	IN	RAIN	rain					
11.	5-22-12					7	DAY	47.6	82.3	F
12.	5-29-12					7	DAY	48.1	90	F
13.	5-30-12	0.07	IN	RAIN	rain					
14.	5-31-12	0.21	IN	RAIN	rain					
15.	6-5-12					7	DAY	50.2	90.1	F
16.	6-11-12	0.75	IN	RAIN	rain					
17.	6-12-12					7	DAY	52.4	93.6	F
18.	6-17-12	0.36	IN	RAIN	rain					
19.	6-19-12					7	DAY	56.3	94	F
20.	6-26-12					7	DAY	51.8	105.4	F
21.	7-3-12					7	DAY	68.9	104.7	F
22.	7-8-12	0.28	IN	RAIN	rain					
23.	7-10-12					7	DAY	63.4	95	F
24.	7-17-12					7	DAY	61	102.2	F
25.	7-24-12					7	DAY	61	103	F
26.	7-29-12	0.15	IN	RAIN	rain					
27.	7-31-12					7	DAY	60.2	99.1	F
28.	8-5-12	0.18	IN	RAIN	rain					
29.	8-7-12					7	DAY	50.2	99.8	F
30.	8-13-12	0.88	IN	RAIN	rain					
31.	8-14-12					7	DAY	51	95.6	F
32.	8-17-12	1.19	IN	RAIN	rain					
33.	8-21-12					7	DAY	54.7	94.2	F
34.	8-26-12	0.04	IN	RAIN	rain					
35.	8-27-12	1.66	IN	RAIN	rain					
36.	8-31-12	0.11	IN	RAIN	rain					

Application Description

	A	B	C
Application Date:	6-20-12	7-6-12	7-13-12
Time of Day:	7:00	8:00	10:00
Application Method:	Spray	Spray	Spray
Application Timing:	V3	R1	R2
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	RFK	TAR	TAR
Air Temperature, Unit:	76 F	90 F	85 F
% Relative Humidity:	71	57	63
Wind Velocity, Unit:	3 MPH	0 MPH	0 MPH
Wind Direction:	S		
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	77 F	84 F	81 F
Soil Moisture:	NORMAL	BELNOR	BELNOR
% Cloud Cover:	0	0	0
Next Rain Occurred On:	7-8-12	7-8-12	7-29-12

Southern Illinois University

Liberty Herbicide Tolerance and Yield Implications in Liberty Link Soybean.

Trial ID: 12-2B-E95
Location: Belleville Res. Center
Investigator: Bryan Young

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	V3	R1	R2
Stage Minimum, Percent:	V3	R1	R2
Stage Maximum, Percent:	V3	R1	R2
Height, Unit:	6 IN	14 IN	18 IN
Height Minimum, Maximum:	4 6	12 14	16 18

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	NA W DESC	NA W DESC	NA W DESC
Stage Majority, Percent:	NA	NA	NA

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	10 FT	10 FT	10 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Liberty Herbicide Tolerance and Yield Implications in Liberty Link Soybean.

Trial ID: 12-2B-E95
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-30-12 Plants 000/A	GLXMA 10-30-12 Moisture Percent	GLXMA 10-30-12 Test wt. lb/bu	GLXMA 10-30-12 Yield bu/A	GLXMA 10-30-12 Seeds per Pod	GLXMA 10-30-12 Seed wt g/200 s	GLXMA Injury Percent 7 DAT	GLXMA Injury Percent 14 DAT
1	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V3	A	135.5 a	12.2 a	57.1 a	49 a	2.35 a	42.56 a	5 bc	0 f
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V3	A								
2	LIBERTY 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	V3	A	122.8 a	12.2 a	57.0 a	48 a	2.34 a	43.53 a	6 b	0 f
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V3	A								
3	COBRA	2	EC	0.195	lb ai/a	12.5	fl oz/a	V3	A	127.5 a	12.1 a	57.1 a	52 a	2.66 a	42.18 a	19 a	14 b
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V3	A								
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V3	A								
4	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	R1	B	135.5 a	12.1 a	57.2 a	50 a	2.27 a	41.96 a	3 c	1 ef
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R1	B								
5	LIBERTY 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	R1	B	130.8 a	11.9 a	57.2 a	53 a	2.20 a	41.10 a	4 c	4 d
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R1	B								
6	COBRA	2	EC	0.195	lb ai/a	12.5	fl oz/a	R1	B	127.5 a	12.3 a	57.0 a	49 a	2.33 a	41.91 a	19 a	12 c
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	B								
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R1	B								
7	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	R2	C	124.2 a	12.2 a	57.1 a	48 a	2.20 a	41.53 a	4 bc	2 ef
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C								
8	LIBERTY 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	R2	C	129.5 a	12.0 a	57.2 a	54 a	2.25 a	39.57 a	4 c	2 de
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C								
9	COBRA	2	EC	0.195	lb ai/a	12.5	fl oz/a	R2	C	123.1 a	12.4 a	57.0 a	43 a	1.99 a	42.27 a	19 a	17 a
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R2	C								
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C								
10	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V3	A	131.0 a	12.0 a	57.2 a	48 a	2.27 a	41.02 a	4 c	0 f
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V3	A								
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	R1	B								
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R1	B								
11	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	V3	A	130.8 a	12.1 a	57.1 a	50 a	2.30 a	40.69 a	4 bc	2 ef
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V3	A								
	LIBERTY 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	R1	B								
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R1	B								
12	NONTREATED									119.5 a	12.1 a	57.1 a	50 a	2.45 a	41.83 a	0 d	0 f
LSD (P=.05)										14.71	0.40	0.23	7.7	0.363	2.012	1.8	1.8
Standard Deviation										10.19	0.28	0.16	5.4	0.251	1.393	1.2	1.2
CV										7.95	2.3	0.28	10.8	10.91	3.34	16.5	28.39
Replicate F										1.424	0.447	1.179	3.739	1.467	3.700	1.637	1.078
Replicate Prob(F)										0.2546	0.7210	0.3338	0.0211	0.2427	0.0219	0.2010	0.3728
Treatment F										0.968	0.887	1.294	1.181	1.615	2.092	137.865	95.664
Treatment Prob(F)										0.4943	0.5625	0.2734	0.3393	0.1434	0.0524	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Liberty Herbicide Tolerance and Yield Implications in Liberty Link Soybean.

Trial ID: 12-2B-E95
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol:ISA (Liberty).
2. Ratings: CI 7 and 14 DAT.
3. Measure harvest indices: plants/acre, pods/plant, seeds/pod, 200 seed wt.
4. Yield.
5. Blanket PRE application of Sonic (6.4 oz/A) plus Dual Magnum (1.33 pt/A) was applied to all plots 10 ft wide on 5-23-12.
6. Maintain weed-free.
7. Missing data for plots 201 and 202 were due to application error.
8. DAT = Days after various postemergence applications.
   Ratings 7 days after the V2, R1, and R2 applications were on 6-27-12, 7-13-12, and 7-20-12, respectively.
   Ratings 14 days after the V2, R1, and R2 applications were on 7-4-12, 7-20-12, and 7-27-12, respectively.
   Ratings at 7 and 14 DAT for treatments 10 and 11 were following the second application, injury following the first application in treatments 10 and 11 were similar to treatment 1.
9. Harvested 10-30-12, (2) 30 inch rows by 25 ft.

Southern Illinois University

Efficacy of CHA-044 Postemergence in Soybean.

Trial ID: 12-2B-MMW50
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-22-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
To determine herbicidal efficacy and selectvity of CHA-044 when applied postemergence to soybean in 2012.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: HS 43L12 **Description:** LL
BBCH Scale: BSOY **Planting Date:** 5-22-12
Planting Method: SEEDED Seeded **Rate, Unit:** 75 LB/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMBTR - Ambrosia trifida L.
Common Name: ragweed, giant

Pest 2 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 3 Type: W **Code:** ABUTH - Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 4 Type: W **Code:** IPOHE - Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf
Description: Mostly IPOHE, some PHBPU (tall mg.)

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT
Plot Area, Unit: 280 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 1.6 **Texture:** SIL SILT LOAM
pH: 6.8 **Soil Name:** PIERRON
CEC: 8

Additional Measured Elements

Element	Quantity	Unit
P1	77	LB/A
K	252	LB/A

Efficacy of CHA-044 Postemergence in Soybean.

Trial ID: 12-2B-MMW50
Location: Belleville Res. Center
Investigator: Bryan Young

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-24-12					7	DAY	42.6	74.3	F
2.	4-29-12	3.06	IN	RAIN	rain					
3.	4-30-12	0.66	IN	RAIN	rain					
4.	5-1-12	0.13	IN	RAIN	rain					
5.	5-1-12					7	DAY	33.5	76	F
6.	5-4-12	0.25	IN	RAIN	rain					
7.	5-7-12	0.29	IN	RAIN	rain					
8.	5-8-12					7	DAY	47.5	87.8	F
9.	5-15-12					7	DAY	37.7	81.3	F
10.	5-21-12	0.18	IN	RAIN	rain					
11.	5-22-12					7	DAY	47.6	82.3	F
12.	5-29-12					7	DAY	48.1	90	F
13.	5-30-12	0.07	IN	RAIN	rain					
14.	5-31-12	0.21	IN	RAIN	rain					
15.	6-5-12					7	DAY	50.2	90.1	F
16.	6-11-12	0.75	IN	RAIN	rain					
17.	6-12-12					7	DAY	52.4	93.6	F
18.	6-17-12	0.36	IN	RAIN	rain					
19.	6-19-12					7	DAY	56.3	94	F
20.	6-26-12					7	DAY	51.8	105.4	F
21.	7-3-12					7	DAY	68.9	104.7	F
22.	7-8-12	0.28	IN	RAIN	rain					
23.	7-10-12					7	DAY	63.4	95	F
24.	7-17-12					7	DAY	61	102.2	F
25.	7-24-12					7	DAY	61	103	F
26.	7-29-12	0.15	IN	RAIN	rain					
27.	7-31-12					7	DAY	60.2	99.1	F
28.	8-5-12	0.18	IN	RAIN	rain					
29.	8-7-12					7	DAY	50.2	99.8	F
30.	8-13-12	0.88	IN	RAIN	rain					
31.	8-14-12					7	DAY	51	95.6	F
32.	8-17-12	1.19	IN	RAIN	rain					
33.	8-21-12					7	DAY	54.7	94.2	F
34.	8-26-12	0.04	IN	RAIN	rain					
35.	8-27-12	1.66	IN	RAIN	rain					
36.	8-31-12	0.11	IN	RAIN	rain					

Application Description

	A
Application Date:	6-8-12
Time of Day:	9:00
Application Method:	Spray
Application Timing:	2"W
Application Placement:	BROFOL
Applied By:	JRK
Air Temperature, Unit:	79 F
% Relative Humidity:	39
Wind Velocity, Unit:	0 MPH
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	72 F
Soil Moisture:	BELNOR
% Cloud Cover:	0
Next Rain Occurred On:	6-11-12

Efficacy of CHA-044 Postemergence in Soybean.

Trial ID: 12-2B-MMW50
Location: Belleville Res. Center
Investigator: Bryan Young

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	V1
Stage Minimum, Percent:	VC
Stage Maximum, Percent:	V1
Height, Unit:	4 IN
Height Minimum, Maximum:	3 4

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMBTR W DESC
Stage Majority, Percent:	4
Stage Minimum, Percent:	Coty
Stage Maximum, Percent:	6
Height, Unit:	2 IN
Height Minimum, Maximum:	1 4
Density, Unit:	0.3 FT2
Pest 2 Code, Type, Scale:	AMATA W DESC
Stage Majority, Percent:	4
Stage Minimum, Percent:	2
Stage Maximum, Percent:	6
Height, Unit:	2 IN
Height Minimum, Maximum:	0.5 3
Density, Unit:	0.01 FT2
Pest 3 Code, Type, Scale:	ABUTH W DESC
Stage Majority, Percent:	2
Stage Minimum, Percent:	Coty
Stage Maximum, Percent:	4
Height, Unit:	2 IN
Height Minimum, Maximum:	0.5 3
Density, Unit:	0.01 FT2
Pest 4 Code, Type, Scale:	IPOHE W DESC
Stage Majority, Percent:	NA

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

Efficacy of CHA-044 Postemergence in Soybean.

Trial ID: 12-2B-MMW50
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-30-12 Moisture Percent	GLXMA 10-30-12 Test wt. lb/bu	GLXMA 10-30-12 Yield bu/A	GLXMA 6-22-12 Injury Percent 14 DA-A	GLXMA 7-6-12 Injury Percent 28 DA-A	GLXMA 7-20-12 Injury Percent 42 DA-A
1	CHA-044	5.25	EC	1.31	lb ai/a	32	fl oz/a	2"W	A	12.0 a	57.3 a	54 a	5 cd	0 a	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
2	CHA-044	5.25	EC	1.64	lb ai/a	40	fl oz/a	2"W	A	12.1 a	57.1 a	50 a	6 c	0 a	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
3	RHYTHM	1.88	ME	0.375	lb ai/a	25.5	fl oz/a	2"W	A	12.0 a	57.2 a	55 a	8 ab	0 a	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
4	DAWN	2	AS	0.375	lb ai/a	24	fl oz/a	2"W	A	11.8 a	57.4 a	57 a	3 d	0 a	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
5	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	2"W	A	11.9 a	57.3 a	54 a	6 bc	0 a	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
6	PREFIX	5.29	EC	1.65	lb ai/a	40	fl oz/a	2"W	A	11.9 a	57.3 a	55 a	9 a	0 a	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
7	NONTREATED									11.9 a	57.1 a	23 b	0 e	0 a	0 a
LSD (P=.05)										0.56	0.46	9.4	2.2	0.0	0.0
Standard Deviation										0.38	0.31	6.3	1.5	0.0	0.0
CV										3.14	0.54	12.71	28.92	0.0	0.0
Replicate F										3.558	3.309	0.391	1.110	0.000	0.000
Replicate Prob(F)										0.0351	0.0438	0.7611	0.3710	1.0000	1.0000
Treatment F										0.275	0.361	14.041	16.288	0.000	0.000
Treatment Prob(F)										0.9415	0.8940	0.0001	0.0001	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Efficacy of CHA-044 Postemergence in Soybean.

Trial ID: 12-2B-MMW50
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-22-12 Chlorosis Percent 14 DA-A	GLXMA 7-6-12 Chlorosis Percent 28 DA-A	GLXMA 7-20-12 Chlorosis Percent 42 DA-A	GLXMA 6-22-12 Necrosis Percent 14 DA-A	GLXMA 7-6-12 Necrosis Percent 28 DA-A	GLXMA 7-20-12 Necrosis Percent 42 DA-A
1	CHA-044	5.25	EC	1.31	lb ai/a	32	fl oz/a	2"W	A	0 a	0 a	0 a	3 b	0 a	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
2	CHA-044	5.25	EC	1.64	lb ai/a	40	fl oz/a	2"W	A	0 a	0 a	0 a	3 b	0 a	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
3	RHYTHM	1.88	ME	0.375	lb ai/a	25.5	fl oz/a	2"W	A	0 a	0 a	0 a	4 ab	0 a	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
4	DAWN	2	AS	0.375	lb ai/a	24	fl oz/a	2"W	A	0 a	0 a	0 a	3 b	0 a	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
5	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	2"W	A	0 a	0 a	0 a	3 b	0 a	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
6	PREFIX	5.29	EC	1.65	lb ai/a	40	fl oz/a	2"W	A	0 a	0 a	0 a	4 a	0 a	0 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
7	NONTREATED									0 a	0 a	0 a	0 c	0 a	0 a
LSD (P=.05)										0.0	0.0	0.0	0.8	0.0	0.0
Standard Deviation										0.0	0.0	0.0	0.5	0.0	0.0
CV										0.0	0.0	0.0	19.71	0.0	0.0
Replicate F										0.000	0.000	0.000	1.737	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000	0.1953	1.0000	1.0000
Treatment F										0.000	0.000	0.000	21.947	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000	0.0001	1.0000	1.0000

Efficacy of CHA-044 Postemergence in Soybean.

Trial ID: 12-2B-MMW50
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-22-12 Stunt Percent 14 DA-A	GLXMA 7-6-12 Stunt Percent 28 DA-A	GLXMA 7-20-12 Stunt Percent 42 DA-A	AMBTR 6-22-12 Control Percent 14 DA-A	AMBTR 6-29-12 Control Percent 21 DA-A	AMBTR 7-13-12 Control Percent 35 DA-A
1	CHA-044	5.25	EC	1.31	lb ai/a	32	fl oz/a	2"W	A	0 b	0 a	0 a	98 a	94 a	95 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
2	CHA-044	5.25	EC	1.64	lb ai/a	40	fl oz/a	2"W	A	0 b	0 a	0 a	98 a	95 a	96 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
3	RHYTHM	1.88	ME	0.375	lb ai/a	25.5	fl oz/a	2"W	A	1 ab	0 a	0 a	99 a	97 a	97 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
4	DAWN	2	AS	0.375	lb ai/a	24	fl oz/a	2"W	A	0 b	0 a	0 a	98 a	96 a	97 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
5	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	2"W	A	0 b	0 a	0 a	99 a	96 a	97 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
6	PREFIX	5.29	EC	1.65	lb ai/a	40	fl oz/a	2"W	A	3 a	0 a	0 a	99 a	96 a	97 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
7	NONTREATED									0 b	0 a	0 a	0 b	0 b	0 b
LSD (P=.05)										1.7	0.0	0.0	1.7	5.1	3.3
Standard Deviation										1.1	0.0	0.0	1.1	3.4	2.3
CV										201.17	0.0	0.0	1.33	4.18	2.73
Replicate F										1.946	0.000	0.000	0.406	2.173	1.811
Replicate Prob(F)										0.1584	1.0000	1.0000	0.7507	0.1266	0.1812
Treatment F										3.450	0.000	0.000	4375.265	445.484	1045.962
Treatment Prob(F)										0.0190	1.0000	1.0000	0.0001	0.0001	0.0001

Efficacy of CHA-044 Postemergence in Soybean.

Trial ID: 12-2B-MMW50
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA 6-22-12 Control Percent 14 DA-A	AMATA 6-29-12 Control Percent 21 DA-A	AMATA 7-13-12 Control Percent 35 DA-A	ABUTH 6-22-12 Control Percent 14 DA-A	ABUTH 6-29-12 Control Percent 21 DA-A	ABUTH 7-13-12 Control Percent 35 DA-A
1	CHA-044	5.25	EC	1.31	lb ai/a	32	fl oz/a	2"W	A	99 a	99 a	99 a	77 b	87 a	70 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
2	CHA-044	5.25	EC	1.64	lb ai/a	40	fl oz/a	2"W	A	99 a	99 a	99 a	80 ab	86 a	69 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
3	RHYTHM	1.88	ME	0.375	lb ai/a	25.5	fl oz/a	2"W	A	99 a	99 a	99 a	81 a	85 a	70 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
4	DAWN	2	AS	0.375	lb ai/a	24	fl oz/a	2"W	A	99 a	99 a	99 a	76 b	84 a	70 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
5	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	2"W	A	99 a	99 a	99 a	80 ab	82 a	74 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
6	PREFIX	5.29	EC	1.65	lb ai/a	40	fl oz/a	2"W	A	99 a	99 a	99 a	80 ab	83 a	71 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A						
7	NONTREATED									0 b	0 b	0 b	0 c	0 b	0 b
LSD (P=.05)										0.0	0.0	0.0	3.8	10.5	9.8
Standard Deviation										0.0	0.0	0.0	2.5	7.1	6.6
CV										0.0	0.0	0.0	3.7	9.81	10.93
Replicate F										0.000	0.000	0.000	0.190	9.795	8.162
Replicate Prob(F)										1.0000	1.0000	1.0000	0.9019	0.0005	0.0012
Treatment F										0.000	0.000	0.000	569.891	81.026	65.286
Treatment Prob(F)										1.0000	1.0000	1.0000	0.0001	0.0001	0.0001

Southern Illinois University

Efficacy of CHA-044 Postemergence in Soybean.

Trial ID: 12-2B-MMW50
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	IPOHE	IPOHE	IPOHE
	Pest Code									IPOHE	IPOHE	IPOHE
	Crop Code											
	Rating Date									6-22-12	6-29-12	7-13-12
	Rating Type									Control	Control	Control
	Rating Unit									Percent	Percent	Percent
	Rating Timing											
	Trt-Eval Interval									14 DA-A	21 DA-A	35 DA-A
1	CHA-044	5.25	EC	1.31	lb ai/a	32	fl oz/a	2"W	A	70 c	71 b	65 ab
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A			
2	CHA-044	5.25	EC	1.64	lb ai/a	40	fl oz/a	2"W	A	70 c	71 b	66 ab
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A			
3	RHYTHM	1.88	ME	0.375	lb ai/a	25.5	fl oz/a	2"W	A	75 ab	73 ab	67 ab
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A			
4	DAWN	2	AS	0.375	lb ai/a	24	fl oz/a	2"W	A	71 bc	76 a	71 a
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A			
5	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	2"W	A	73 abc	75 ab	63 b
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A			
6	PREFIX	5.29	EC	1.65	lb ai/a	40	fl oz/a	2"W	A	76 a	76 a	69 ab
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	2"W	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	2"W	A			
7	NONTREATED									0 d	0 c	0 c
	LSD (P=.05)									4.2	4.0	6.5
	Standard Deviation									2.8	2.7	4.4
	CV									4.5	4.29	7.66
	Replicate F									0.911	3.081	0.205
	Replicate Prob(F)									0.4551	0.0537	0.8914
	Treatment F									386.165	425.919	133.945
	Treatment Prob(F)									0.0001	0.0001	0.0001

Southern Illinois University

Efficacy of CHA-044 Postemergence in Soybean.

Trial ID: 12-2B-MMW50
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Cheminova (HGLXMAFOMME1204).
2. Ratings: CI as overall/chlorosis/necrosis/stunting at 14, 28, and 42 DAT.
   WC at 14, 21, and 35 DAT.
3. Yield.
4. Rainfall following the PRE application was 0.75 inch 3 days later and 0.36 inch 9 days later.
5. Harvested 10-30-12, (2) 30 inch rows by 25 ft.

Efficacy of CHA-044 Preemergence in Soybean.

Trial ID: 12-2B-MW40
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-22-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
To determine herbicidal efficacy and selectvity of CHA-044 when applied preemergence to soybean in 2012.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: HS 43L12 **Description:** LL
BBCH Scale: BSOY **Planting Date:** 5-22-12
Planting Method: SEEDED Seeded **Rate, Unit:** 75 LB/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMBTR - Ambrosia trifida L.
Common Name: ragweed, giant

Pest 2 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common

Pest 3 Type: W **Code:** ABUTH - Abutilon theophrasti Medik.
Common Name: velvetleaf

Pest 4 Type: W **Code:** IPOHE - Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT
Plot Area, Unit: 280 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Description

% OM: 1.6 **Texture:** SIL SILT LOAM
pH: 6.8 **Soil Name:** PIERRON
CEC: 8

Additional Measured Elements

Element	Quantity	Unit
P1	77	LB/A
K	252	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Efficacy of CHA-044 Preemergence in Soybean.

Trial ID: 12-2B-MW40
Location: Belleville Res. Center
Investigator: Bryan Young

Application Description

	A
Application Date:	5-23-12
Time of Day:	18:00
Application Method:	Spray
Application Timing:	PRE
Application Placement:	BROSOI
Applied By:	RJW
Air Temperature, Unit:	80 F
% Relative Humidity:	38
Wind Velocity, Unit:	8 MPH
Wind Direction:	S
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	67 F
Soil Moisture:	BELNOR
% Cloud Cover:	10
Next Rain Occurred On:	5-31-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMBTR W DESC
Stage Majority, Percent:	NA
Pest 2 Code, Type, Scale:	AMATA W DESC
Stage Majority, Percent:	NA
Pest 3 Code, Type, Scale:	ABUTH W DESC
Stage Majority, Percent:	NA
Pest 4 Code, Type, Scale:	IPOHE W DESC
Stage Majority, Percent:	NA

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

Efficacy of CHA-044 Preemergence in Soybean.

Trial ID: 12-2B-MW40
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-6-12 Injury Percent 14 DA-A	GLXMA 6-20-12 Injury Percent 28 DA-A	GLXMA 7-4-12 Injury Percent 42 DA-A	GLXMA 6-6-12 Chlorosis Percent 14 DA-A	GLXMA 6-20-12 Chlorosis Percent 28 DA-A	GLXMA 7-4-12 Chlorosis Percent 42 DA-A
1	CHA-044	5.25	EC	1.31	lb ai/a	32	fl oz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
2	CHA-044	5.25	EC	1.64	lb ai/a	40	fl oz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
3	DAWN	2	AS	0.375	lb ai/a	24	fl oz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
	ALERT	3	ME	0.50	lb ai/a	21.3	fl oz/a	PRE	A						
4	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
5	PREFIX	5.29	EC	1.65	lb ai/a	40	fl oz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
6	NONTREATED									0 a	0 a	0 a	0 a	0 a	0 a
LSD (P=.05)										0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation										0.0	0.0	0.0	0.0	0.0	0.0
CV										0.0	0.0	0.0	0.0	0.0	0.0
Replicate F										0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Efficacy of CHA-044 Preemergence in Soybean.

Trial ID: 12-2B-MW40
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-6-12 Necrosis Percent 14 DA-A	GLXMA 6-20-12 Necrosis Percent 28 DA-A	GLXMA 7-4-12 Necrosis Percent 42 DA-A	GLXMA 6-6-12 Stunt Percent 14 DA-A	GLXMA 6-20-12 Stunt Percent 28 DA-A	GLXMA 7-4-12 Stunt Percent 42 DA-A
1	CHA-044	5.25	EC	1.31	lb ai/a	32	fl oz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
2	CHA-044	5.25	EC	1.64	lb ai/a	40	fl oz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
3	DAWN	2	AS	0.375	lb ai/a	24	fl oz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
	ALERT	3	ME	0.50	lb ai/a	21.3	fl oz/a	PRE	A						
4	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
5	PREFIX	5.29	EC	1.65	lb ai/a	40	fl oz/a	PRE	A	0 a	0 a	0 a	0 a	0 a	0 a
6	NONTREATED									0 a	0 a	0 a	0 a	0 a	0 a
LSD (P=.05)										0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation										0.0	0.0	0.0	0.0	0.0	0.0
CV										0.0	0.0	0.0	0.0	0.0	0.0
Replicate F										0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Efficacy of CHA-044 Preemergence in Soybean.

Trial ID: 12-2B-MW40
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
Pest Code										AMBTR	AMBTR	AMBTR	AMATA	AMATA	AMATA
Crop Code															
Rating Date										6-13-12	6-27-12	7-11-12	6-13-12	6-27-12	7-11-12
Rating Type										Control	Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing															
Trt-Eval Interval										21 DA-A	35 DA-A	49 DA-A	21 DA-A	35 DA-A	49 DA-A
1	CHA-044	5.25	EC	1.31	lb ai/a	32	fl oz/a	PRE	A	15 bc	11 b	10 a	8 b	6 bc	5 a
2	CHA-044	5.25	EC	1.64	lb ai/a	40	fl oz/a	PRE	A	20 ab	16 ab	10 a	15 a	13 ab	5 a
3	DAWN	2	AS	0.375	lb ai/a	24	fl oz/a	PRE	A	26 a	23 a	11 a	18 a	8 abc	5 a
	ALERT	3	ME	0.50	lb ai/a	21.3	fl oz/a	PRE	A						
4	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	A	10 c	11 b	3 a	15 a	15 a	10 a
5	PREFIX	5.29	EC	1.65	lb ai/a	40	fl oz/a	PRE	A	20 ab	8 bc	3 a	20 a	15 a	8 a
6	NONTREATED									0 d	0 c	0 a	0 c	0 c	0 a
LSD (P=.05)										9.3	8.9	12.1	7.5	7.5	8.9
Standard Deviation										6.1	5.9	8.1	4.9	5.0	5.9
CV										40.38	51.78	133.37	39.55	53.26	109.65
Replicate F										1.796	4.527	2.540	2.500	0.599	0.433
Replicate Prob(F)										0.1912	0.0189	0.0956	0.0991	0.6256	0.7324
Treatment F										9.044	6.633	1.479	9.000	5.591	1.252
Treatment Prob(F)										0.0004	0.0019	0.2544	0.0004	0.0042	0.3343

Efficacy of CHA-044 Preemergence in Soybean.

Trial ID: 12-2B-MW40
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ABUTH	ABUTH	ABUTH	IPOHE	IPOHE	IPOHE
Pest Code										ABUTH	ABUTH	ABUTH	IPOHE	IPOHE	IPOHE
Crop Code															
Rating Date										6-13-12	6-27-12	7-11-12	6-13-12	6-27-12	7-11-12
Rating Type										Control	Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing															
Trt-Eval Interval										21 DA-A	35 DA-A	49 DA-A	21 DA-A	35 DA-A	49 DA-A
1	CHA-044	5.25	EC	1.31	lb ai/a	32	fl oz/a	PRE	A	10 c	10 bc	3 bc	5 bc	1 c	0 a
2	CHA-044	5.25	EC	1.64	lb ai/a	40	fl oz/a	PRE	A	15 bc	6 bc	3 bc	15 a	11 a	3 a
3	DAWN	2	AS	0.375	lb ai/a	24	fl oz/a	PRE	A	38 a	25 a	18 a	18 a	11 a	0 a
	ALERT	3	ME	0.50	lb ai/a	21.3	fl oz/a	PRE	A						
4	PREFIX	5.29	EC	1.32	lb ai/a	32	fl oz/a	PRE	A	15 bc	15 ab	10 ab	5 bc	3 bc	0 a
5	PREFIX	5.29	EC	1.65	lb ai/a	40	fl oz/a	PRE	A	23 b	18 ab	3 bc	13 ab	9 ab	0 a
6	NONTREATED									0 d	0 c	0 c	0 c	0 c	0 a
LSD (P=.05)										8.3	11.5	7.9	9.3	7.4	3.1
Standard Deviation										5.5	7.6	5.3	6.1	4.9	2.0
CV										32.86	62.1	90.35	67.05	83.79	489.9
Replicate F										3.333	0.399	1.000	4.265	1.977	1.000
Replicate Prob(F)										0.0481	0.7555	0.4199	0.0230	0.1608	0.4199
Treatment F										21.222	5.338	6.360	4.941	4.465	1.000
Treatment Prob(F)										0.0001	0.0051	0.0023	0.0072	0.0108	0.4509

Southern Illinois University

Efficacy of CHA-044 Preemergence in Soybean.

Trial ID: 12-2B-MW40
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Cheminova (HGLXMAFOMME1203).
2. Ratings: CI as overall/chlorosis/necrosis/stunting at 14, 28, and 42 DAT.
   WC at 21, 35, and 49 DAT.
3. Yield.
4. Rainfall following the PRE application was 0.28 inch 8 days later and 0.75 inch 19 days later.
5. Not harvested, too weedy.

Southern Illinois University

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date- May 1.

Trial ID: 12-3-W240
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-18-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate the crop response and yield of soybean following three postemergence application timings of tank-mixtures with glyphosate under weed-free conditions.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG 4005 **Description:** RR
BBCH Scale: BSOY **Planting Date:** 5-18-12
Planting Method: SEEDED Seeded **Rate, Unit:** 75 LB/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** NA
Common Name: crop tolerance only

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 25 FT
Plot Area, Unit: 250 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 200 LB/A

Soil Description

% OM: 1.4 **Texture:** SIL SILT LOAM
pH: 5.9 **Soil Name:** PIERRON
CEC: 7

Additional Measured Elements

Element	Quantity	Unit
P1	97	LB/A
K	240	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date- May 1.

Trial ID: 12-3-W240
Location: Belleville Res. Center
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-24-12					7	DAY	42.6	74.3	F
2.	4-29-12	3.06	IN	RAIN	rain					
3.	4-30-12	0.66	IN	RAIN	rain					
4.	5-1-12	0.13	IN	RAIN	rain					
5.	5-1-12					7	DAY	33.5	76	F
6.	5-4-12	0.25	IN	RAIN	rain					
7.	5-7-12	0.29	IN	RAIN	rain					
8.	5-8-12					7	DAY	47.5	87.8	F
9.	5-15-12					7	DAY	37.7	81.3	F
10.	5-21-12	0.18	IN	RAIN	rain					
11.	5-22-12					7	DAY	47.6	82.3	F
12.	5-29-12					7	DAY	48.1	90	F
13.	5-30-12	0.07	IN	RAIN	rain					
14.	5-31-12	0.21	IN	RAIN	rain					
15.	6-5-12					7	DAY	50.2	90.1	F
16.	6-11-12	0.75	IN	RAIN	rain					
17.	6-12-12					7	DAY	52.4	93.6	F
18.	6-17-12	0.36	IN	RAIN	rain					
19.	6-19-12					7	DAY	56.3	94	F
20.	6-26-12					7	DAY	51.8	105.4	F
21.	7-3-12					7	DAY	68.9	104.7	F
22.	7-8-12	0.28	IN	RAIN	rain					
23.	7-10-12					7	DAY	63.4	95	F
24.	7-17-12					7	DAY	61	102.2	F
25.	7-24-12					7	DAY	61	103	F
26.	7-29-12	0.15	IN	RAIN	rain					
27.	7-31-12					7	DAY	60.2	99.1	F
28.	8-5-12	0.18	IN	RAIN	rain					
29.	8-7-12					7	DAY	50.2	99.8	F
30.	8-13-12	0.88	IN	RAIN	rain					
31.	8-14-12					7	DAY	51	95.6	F
32.	8-17-12	1.19	IN	RAIN	rain					
33.	8-21-12					7	DAY	54.7	94.2	F
34.	8-26-12	0.04	IN	RAIN	rain					
35.	8-27-12	1.66	IN	RAIN	rain					
36.	8-31-12	0.11	IN	RAIN	rain					

Application Description

	A	B	C
Application Date:	6-15-12	7-2-12	7-9-12
Time of Day:	9:00	9:00	9:00
Application Method:	Spray	Spray	Spray
Application Timing:	V2-3	V5-6	R2
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	RJW	TR	TR
Air Temperature, Unit:	78 F	87 F	80 F
% Relative Humidity:	62	59	62
Wind Velocity, Unit:	4 MPH	0 MPH	0 MPH
Wind Direction:	SW		
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	74 F	81 F	83 F
Soil Moisture:	NORMAL	BELNOR	BELNOR
% Cloud Cover:	80	0	80
Next Rain Occurred On:	6-17-12	7-8-12	7-29-12

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date- May 1.

Trial ID: 12-3-W240
Location: Belleville Res. Center
Investigator: Bryan Young

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	V3	V6	R2
Stage Minimum, Percent:	V2	V5	R2
Stage Maximum, Percent:	V3	V6	R2
Height, Unit:	6 IN	12 IN	18 IN
Height Minimum, Maximum:	4 6	10 12	15 18

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	NA W DESC	NA W DESC	NA W DESC
Stage Majority, Percent:	NA	NA	NA

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date- May 1.

Trial ID: 12-3-W240
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-11-12 Height cm EOS	GLXMA 10-25-12 Moisture Percent	GLXMA 10-25-12 Test wt. lb/bu	GLXMA 10-25-12 Yield bu/A	GLXMA 10-25-12 200 Seed Wt gram
1	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	85 a	12.4 a	57.4 a	53 a	40.77 d-j
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
2	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	87 a	12.2 a	57.4 a	54 a	40.77 d-j
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	86 a	12.4 a	57.2 a	58 a	39.16 j
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	86 a	12.4 a	57.2 a	55 a	40.21 hij
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	89 a	12.6 a	57.1 a	62 a	40.12 ij
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	88 a	12.6 a	56.8 a	60 a	40.52 e-j
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	86 a	12.5 a	56.9 a	57 a	40.53 e-j
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	84 a	12.1 a	57.4 a	53 a	41.13 c-i
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	87 a	12.6 a	56.9 a	58 a	40.22 g-j
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	90 a	12.5 a	57.1 a	60 a	40.29 f-j
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	88 a	12.3 a	57.0 a	57 a	41.26 b-i
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	89 a	12.9 a	56.9 a	57 a	40.66 e-j
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	87 a	12.6 a	57.1 a	54 a	41.90 a-f
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	90 a	12.8 a	57.1 a	57 a	41.30 b-i
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
15	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B	87 a	12.8 a	56.9 a	56 a	42.05 a-e
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
16	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B	90 a	12.7 a	57.1 a	51 a	41.96 a-e
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date- May 1.

Trial ID: 12-3-W240
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-11-12 Height cm EOS	GLXMA 10-25-12 Moisture Percent	GLXMA 10-25-12 Test wt. lb/bu	GLXMA 10-25-12 Yield bu/A	GLXMA 10-25-12 200 Seed Wt gram
17	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	90 a	12.3 a	57.4 a	55 a	42.04 a-e
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
18	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	86 a	12.4 a	57.5 a	50 a	41.30 b-i
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
19	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	87 a	12.1 a	57.5 a	54 a	43.23 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
20	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	92 a	12.5 a	57.4 a	55 a	42.36 a-d
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
21	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	91 a	12.4 a	57.3 a	59 a	41.59 b-i
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
22	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	88 a	12.8 a	56.9 a	52 a	42.40 abc
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
23	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	90 a	12.5 a	57.2 a	60 a	41.95 a-e
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
24	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	91 a	12.5 a	57.1 a	54 a	41.57 b-i
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
25	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	89 a	12.7 a	57.1 a	60 a	41.29 b-i
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
26	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	92 a	12.6 a	56.9 a	58 a	42.81 ab
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
27	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	92 a	12.6 a	56.8 a	60 a	41.09 c-i
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
28	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	88 a	12.5 a	57.0 a	53 a	41.57 b-i
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
29	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C	89 a	12.8 a	56.9 a	59 a	41.64 a-i
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
30	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C	86 a	12.8 a	56.6 a	52 a	41.84 a-g
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
31	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	88 a	12.5 a	57.1 a	57 a	41.66 a-i
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
32	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	89 a	12.4 a	57.1 a	55 a	41.06 c-i
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date- May 1.

Trial ID: 12-3-W240
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-11-12 Height cm EOS	GLXMA 10-25-12 Moisture Percent	GLXMA 10-25-12 Test wt. lb/bu	GLXMA 10-25-12 Yield bu/A	GLXMA 10-25-12 200 Seed Wt gram
33	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	89 a	12.4 a	57.3 a	56 a	41.20 b-i
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
34	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	89 a	12.5 a	57.0 a	56 a	41.65 a-i
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
35	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	91 a	12.3 a	57.0 a	59 a	41.43 b-i
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
36	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	89 a	12.2 a	57.3 a	53 a	41.74 a-i
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
37	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	88 a	12.5 a	57.1 a	58 a	40.90 c-i
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
38	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	89 a	12.2 a	57.2 a	54 a	41.91 a-f
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
39	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	91 a	12.3 a	57.3 a	58 a	40.96 c-i
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
40	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	89 a	12.1 a	57.4 a	57 a	41.59 b-i
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
41	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	88 a	12.1 a	57.7 a	53 a	41.12 c-i
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
42	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	85 a	12.6 a	57.3 a	55 a	41.32 b-i
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
43	NONTREATED									88 a	12.3 a	57.4 a	58 a	41.75 a-h
LSD (P=.05)										6.4	0.77	0.76	9.2	1.624
Standard Deviation										4.6	0.55	0.54	6.6	1.160
CV										5.17	4.41	0.95	11.74	2.81
Replicate F										2.127	1.463	0.170	3.329	10.124
Replicate Prob(F)										0.1002	0.2279	0.9162	0.0218	0.0001
Treatment F										0.785	0.615	0.661	0.744	1.725
Treatment Prob(F)										0.8145	0.9641	0.9374	0.8641	0.0112

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date- May 1.

Trial ID: 12-3-W240
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Injury Percent 4 DAT	GLXMA Injury Percen 7 DAT	GLXMA Injury Percent 14 DAT	GLXMA Injury Percent 28 DAT	GLXMA Injury Percent 56 DAT	GLXMA 10-11-12 Injury Percent EOS
1	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	0 q	0 q	0 r	0 i	0 c	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
2	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	0 q	0 q	0 r	0 i	0 c	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	15 bc	15 cd	10 cd	1 g	1 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	16 b	17 b	11 c	1 g	1 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	18 a	19 a	15 a	1 g	1 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	18 a	19 a	15 a	1 g	1 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	12 de	12 ij	9 de	1 g	1 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	13 d	13 gh	9 de	1 g	1 b	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	14 c	14 de	11 c	1 g	1 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	16 b	16 bc	12 b	1 g	1 b	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	7 hi	8 lm	3 mn	0 i	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	8 h	10 k	3 mn	0 i	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	11 fg	11 jk	4 klm	0 i	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	11 ef	10 k	4 klm	0 i	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
15	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B	0 q	0 q	0 r	0 i	0 c	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
16	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B	0 q	0 q	0 r	0 i	0 c	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date- May 1.

Trial ID: 12-3-W240
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Injury Percent 4 DAT	GLXMA Injury Percen 7 DAT	GLXMA Injury Percent 14 DAT	GLXMA Injury Percent 28 DAT	GLXMA Injury Percent 56 DAT	GLXMA 10-11-12 Injury Percent EOS
17	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	7 ij	7 lm	5 jk	3 d	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
18	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	8 hi	8 lm	5 jk	3 d	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
19	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	8 h	8 l	6 i	3 d	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
20	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	10 g	10 k	6 hi	3 cd	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
21	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	3 p	3 p	1 qr	0 i	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
22	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	3 op	4 p	1 qr	0 hi	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
23	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	3 p	4 op	2 opq	1 g	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
24	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	5 lmn	7 m	4 klm	1 fg	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
25	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	3 p	3 p	2 pq	0 i	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
26	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	3 op	3 p	1 pq	0 i	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
27	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	3 p	3 p	1 qr	0 i	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
28	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	3 p	3 p	1 pq	0 i	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
29	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C	0 q	0 q	0 r	0 i	0 c	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
30	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C	0 q	0 q	3 mno	0 i	0 c	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
31	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	10 g	12 hi	6 hi	5 b	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
32	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	10 g	13 fgh	9 ef	6 a	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date- May 1.

Trial ID: 12-3-W240
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Injury Percent 4 DAT	GLXMA Injury Percen 7 DAT	GLXMA Injury Percent 14 DAT	GLXMA Injury Percent 28 DAT	GLXMA Injury Percent 56 DAT	GLXMA 10-11-12 Injury Percent EOS
33	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	12 ef	14 def	7 gh	5 ab	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
34	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	12 de	14 efg	8 fg	6 a	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
35	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	5 lmn	5 no	3 lmn	1 gh	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
36	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	6 jkl	8 lm	5 ij	3 d	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
37	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	4 mno	5 n	4 jkl	2 e	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
38	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	6 jk	8 lm	5 ij	4 c	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
39	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	4 nop	4 op	2 nop	1 gh	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
40	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	4 m-p	5 no	4 klm	2 ef	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
41	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	5 klm	6 n	3 mn	2 e	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
42	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	5 lmn	5 n	3 mn	1 g	0 c	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
43	NONTREATED									0 q	0 q	0 r	0 i	0 c	0 a
LSD (P=.05)										1.1	1.2	1.1	0.6	0.2	0.0
Standard Deviation										0.8	0.8	0.8	0.4	0.1	0.0
CV										11.26	10.99	16.14	30.78	62.32	0.0
Replicate F										0.861	2.617	0.334	1.303	0.656	0.000
Replicate Prob(F)										0.4634	0.0539	0.8009	0.2763	0.5806	1.0000
Treatment F										188.275	179.110	117.029	63.146	46.893	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	1.0000

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date- May 1.

Trial ID: 12-3-W240
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Stunt Percent 4 DAT	GLXMA Stunt Percent 7 DAT	GLXMA Stunt Percent 14 DAT	GLXMA Stunt Percent 28 DAT	GLXMA Stunt Percent 56 DAT	GLXMA 10-11-12 Stunt Percent EOS
1	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	0 a	0 a	0 d	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
2	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	0 a	0 a	0 d	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	0 a	0 a	1 c	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	0 a	1 a	3 a	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	0 a	1 a	3 a	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	0 a	0 a	2 b	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	0 a	0 a	2 b	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	0 a	0 a	2 c	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	0 a	0 a	2 b	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
15	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B	0 a	0 a	0 d	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
16	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B	0 a	0 a	0 d	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date- May 1.

Trial ID: 12-3-W240
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Stunt Percent 4 DAT	GLXMA Stunt Percent 7 DAT	GLXMA Stunt Percent 14 DAT	GLXMA Stunt Percent 28 DAT	GLXMA Stunt Percent 56 DAT	GLXMA 10-11-12 Stunt Percent EOS
17	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
18	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
19	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
20	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
21	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
22	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
23	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
24	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
25	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
26	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
27	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
28	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
29	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C	0 a	0 a	0 d	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
30	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C	0 a	0 a	0 d	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
31	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
32	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date- May 1.

Trial ID: 12-3-W240
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Stunt Percent 4 DAT	GLXMA Stunt Percent 7 DAT	GLXMA Stunt Percent 14 DAT	GLXMA Stunt Percent 28 DAT	GLXMA Stunt Percent 56 DAT	GLXMA 10-11-12 Stunt Percent EOS
33	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
34	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
35	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
36	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
37	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
38	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
39	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
40	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
41	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
42	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	0 a	0 a	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
43	NONTREATED									0 a	0 a	0 d	0 a	0 a	0 a
LSD (P=.05)										0.0	0.6	0.7	0.0	0.0	0.0
Standard Deviation										0.0	0.5	0.5	0.0	0.0	0.0
CV										0.0	659.23	143.65	0.0	0.0	0.0
Replicate F										0.000	0.880	1.038	0.000	0.000	0.000
Replicate Prob(F)										1.0000	0.4537	0.3783	1.0000	1.0000	1.0000
Treatment F										0.000	1.369	11.386	0.000	0.000	0.000
Treatment Prob(F)										1.0000	0.0945	0.0001	1.0000	1.0000	1.0000

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date- May 1.

Trial ID: 12-3-W240
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Chlorosis Percent 4 DAT	GLXMA Chlorosis Percent 7 DAT	GLXMA Chlorosis Percent 14 DAT	GLXMA Chlorosis Percent 28 DAT	GLXMA Chlorosis Percent 56 DAT	GLXMA 10-11-12 Chlorosis Percent EOS
1	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	0 c	0 g	0 f	0 e	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
2	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	0 c	0 g	0 f	0 e	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	0 c	0 g	0 f	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	0 c	0 g	0 f	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	0 c	0 g	0 f	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	0 c	0 g	0 f	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	0 c	0 g	0 f	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	0 c	0 g	0 f	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	0 c	0 g	0 f	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	0 c	1 f	0 f	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	0 c	0 g	0 f	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	0 c	0 g	0 f	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	0 c	0 g	0 f	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	0 c	0 g	0 f	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
15	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B	0 c	0 g	0 f	0 e	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
16	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B	0 c	0 g	0 f	0 e	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date- May 1.

Trial ID: 12-3-W240
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Chlorosis Percent 4 DAT	GLXMA Chlorosis Percent 7 DAT	GLXMA Chlorosis Percent 14 DAT	GLXMA Chlorosis Percent 28 DAT	GLXMA Chlorosis Percent 56 DAT	GLXMA 10-11-12 Chlorosis Percent EOS
17	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	0 c	0 g	0 f	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
18	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	0 c	0 g	0 f	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
19	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	0 c	0 g	0 f	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
20	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	0 c	0 g	1 ef	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
21	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	0 c	1 f	1 cde	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
22	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	0 c	3 d	1 cde	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
23	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	0 c	3 c	2 bc	1 bc	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
24	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	0 c	5 a	3 a	2 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
25	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	0 c	0 g	0 f	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
26	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	1 b	0 g	0 ef	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
27	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	0 c	0 g	0 f	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
28	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	0 c	0 g	0 f	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
29	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C	0 c	0 g	0 f	0 e	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
30	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C	0 c	0 g	3 a	0 e	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
31	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	0 c	0 g	1 ef	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
32	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	0 c	0 g	3 a	1 cd	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date- May 1.

Trial ID: 12-3-W240
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Chlorosis Percent 4 DAT	GLXMA Chlorosis Percent 7 DAT	GLXMA Chlorosis Percent 14 DAT	GLXMA Chlorosis Percent 28 DAT	GLXMA Chlorosis Percent 56 DAT	GLXMA 10-11-12 Chlorosis Percent EOS
	Pest Code														
	Crop Code									GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
	Rating Date														10-11-12
	Rating Type									Chlorosis	Chlorosis	Chlorosis	Chlorosis	Chlorosis	Chlorosis
	Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
	Rating Timing														
	Trt-Eval Interval									4 DAT	7 DAT	14 DAT	28 DAT	56 DAT	EOS
33	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	0 c	0 g	1 cde	1 de	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
34	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	0 c	0 g	3 a	1 cd	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
35	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	1 b	2 e	2 cd	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
36	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	1 a	3 cd	3 ab	2 ab	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
37	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	2 a	3 cd	2 bc	1 bc	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
38	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	2 a	4 b	3 a	2 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
39	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	0 c	0 g	0 f	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
40	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	0 c	0 g	2 cd	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
41	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	0 c	0 g	1 def	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
42	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	0 c	0 g	1 ef	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
43	NONTREATED									0 c	0 g	0 f	0 e	0 a	0 a
	LSD (P=.05)									0.4	0.5	0.8	0.5	0.0	0.0
	Standard Deviation									0.3	0.4	0.5	0.4	0.0	0.0
	CV									258.04	67.93	80.34	145.37	0.0	0.0
	Replicate F									1.152	0.552	1.479	1.541	0.000	0.000
	Replicate Prob(F)									0.3309	0.6475	0.2236	0.2073	1.0000	1.0000
	Treatment F									5.682	45.782	14.255	9.625	0.000	0.000
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	1.0000	1.0000

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date- May 1.

Trial ID: 12-3-W240
Location: Belleville Res. Center
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval								GLXMA Necrosis Percent 4 DAT	GLXMA Necrosis Percent 7 DAT	GLXMA Necrosis Percent 14 DAT	GLXMA Necrosis Percent 28 DAT	GLXMA Necrosis Percent 56 DAT	GLXMA 10-11-12 Necrosis Percent EOS
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	ROUNDUP P-MAX N-PAK AMS	4.5 100	SL SL	0.77 5	lb ae/a % v/v	22 5	fl oz/a % v/v	V2-3 V2-3	A A	0 k	0 q	0 m	0 f	0 a	0 a
2	ROUNDUP P-MAX N-PAK AMS	4.5 100	SL SL	1.55 5	lb ae/a % v/v	44 5	fl oz/a % v/v	V2-3 V2-3	A A	0 k	0 q	0 m	0 f	0 a	0 a
3	COBRA ROUNDUP P-MAX N-PAK AMS	2 4.5 100	EC SL SL	0.094 0.77 5	lb ai/a lb ae/a % v/v	6 22 5	fl oz/a fl oz/a % v/v	V2-3 V2-3 V2-3	A A A	10 cd	10 de	7 b	0 f	0 a	0 a
4	COBRA ROUNDUP P-MAX N-PAK AMS	2 4.5 100	EC SL SL	0.094 1.55 5	lb ai/a lb ae/a % v/v	6 44 5	fl oz/a fl oz/a % v/v	V2-3 V2-3 V2-3	A A A	12 b	12 abc	7 b	0 f	0 a	0 a
5	COBRA ROUNDUP P-MAX N-PAK AMS	2 4.5 100	EC SL SL	0.188 0.77 5	lb ai/a lb ae/a % v/v	12 22 5	fl oz/a fl oz/a % v/v	V2-3 V2-3 V2-3	A A A	14 a	12 ab	10 a	0 f	0 a	0 a
6	COBRA ROUNDUP P-MAX N-PAK AMS	2 4.5 100	EC SL SL	0.188 1.55 5	lb ai/a lb ae/a % v/v	12 44 5	fl oz/a fl oz/a % v/v	V2-3 V2-3 V2-3	A A A	14 a	12 a	10 a	0 f	0 a	0 a
7	FLEXSTAR ROUNDUP P-MAX N-PAK AMS	1.88 4.5 100	EC SL SL	0.235 0.77 5	lb ai/a lb ae/a % v/v	1 22 5	pt/a fl oz/a % v/v	V2-3 V2-3 V2-3	A A A	10 d	8 ghi	5 e	0 f	0 a	0 a
8	FLEXSTAR ROUNDUP P-MAX N-PAK AMS	1.88 4.5 100	EC SL SL	0.235 1.55 5	lb ai/a lb ae/a % v/v	1 44 5	pt/a fl oz/a % v/v	V2-3 V2-3 V2-3	A A A	10 cd	8 gh	5 e	0 f	0 a	0 a
9	FLEXSTAR ROUNDUP P-MAX N-PAK AMS	1.88 4.5 100	EC SL SL	0.375 0.77 5	lb ai/a lb ae/a % v/v	1.6 22 5	pt/a fl oz/a % v/v	V2-3 V2-3 V2-3	A A A	10 cd	10 ef	7 b	0 f	0 a	0 a
10	FLEXSTAR ROUNDUP P-MAX N-PAK AMS	1.88 4.5 100	EC SL SL	0.375 1.55 5	lb ai/a lb ae/a % v/v	1.6 44 5	pt/a fl oz/a % v/v	V2-3 V2-3 V2-3	A A A	11 bc	11 cde	7 bc	0 f	0 a	0 a
11	CADET ROUNDUP P-MAX N-PAK AMS	0.91 4.5 100	EC SL SL	0.00427 0.77 5	lb ai/a lb ae/a % v/v	0.6 22 5	fl oz/a fl oz/a % v/v	V2-3 V2-3 V2-3	A A A	7 ef	7 hi	3 fgh	0 f	0 a	0 a
12	CADET ROUNDUP P-MAX N-PAK AMS	0.91 4.5 100	EC SL SL	0.00427 1.55 5	lb ai/a lb ae/a % v/v	0.6 44 5	fl oz/a fl oz/a % v/v	V2-3 V2-3 V2-3	A A A	8 e	7 hi	3 fgh	0 f	0 a	0 a
13	CADET ROUNDUP P-MAX N-PAK AMS	0.91 4.5 100	EC SL SL	0.0064 0.77 5	lb ai/a lb ae/a % v/v	0.9 22 5	fl oz/a fl oz/a % v/v	V2-3 V2-3 V2-3	A A A	10 cd	8 gh	4 fg	0 f	0 a	0 a
14	CADET ROUNDUP P-MAX N-PAK AMS	0.91 4.5 100	EC SL SL	0.0064 1.55 5	lb ai/a lb ae/a % v/v	0.9 44 5	fl oz/a fl oz/a % v/v	V2-3 V2-3 V2-3	A A A	11 c	8 gh	4 f	0 f	0 a	0 a
15	ROUNDUP P-MAX N-PAK AMS	4.5 100	SL SL	0.77 5	lb ae/a % v/v	22 5	fl oz/a % v/v	V5-6 V5-6	B B	0 k	0 q	0 m	0 f	0 a	0 a
16	ROUNDUP P-MAX N-PAK AMS	4.5 100	SL SL	1.55 5	lb ae/a % v/v	44 5	fl oz/a % v/v	V5-6 V5-6	B B	0 k	0 q	0 m	0 f	0 a	0 a

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date- May 1.

Trial ID: 12-3-W240
Location: Belleville Res. Center
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval								GLXMA Necrosis Percent 4 DAT	GLXMA Necrosis Percent 7 DAT	GLXMA Necrosis Percent 14 DAT	GLXMA Necrosis Percent 28 DAT	GLXMA Necrosis Percent 56 DAT	GLXMA 10-11-12 Necrosis Percent EOS
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
17	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	7 f	7 ij	4 fg	2 bc	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
18	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	7 f	7 ij	4 fg	2 bc	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
19	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	7 ef	7 hi	5 e	2 bc	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
20	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	8 e	9 fg	5 e	2 b	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
21	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	3 j	3 p	1 lm	0 f	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
22	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	3 j	3 p	1 kl	0 f	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
23	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	3 j	2 p	1 lm	0 f	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
24	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	5 gh	3 p	1 kl	0 f	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
25	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	3 j	3 op	2 jk	0 f	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
26	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	3 j	3 op	1 kl	0 f	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
27	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	3 j	3 op	1 kl	0 f	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
28	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	3 j	3 nop	1 kl	0 f	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
29	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C	0 k	0 q	0 m	0 f	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
30	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C	0 k	0 q	0 m	0 f	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
31	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	8 e	10 de	5 de	4 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
32	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	8 e	11 bcd	6 de	4 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date- May 1.

Trial ID: 12-3-W240
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Necrosis Percent 4 DAT	GLXMA Necrosis Percent 7 DAT	GLXMA Necrosis Percent 14 DAT	GLXMA Necrosis Percent 28 DAT	GLXMA Necrosis Percent 56 DAT	GLXMA 10-11-12 Necrosis Percent EOS
33	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	8 e	12 ab	6 cd	5 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
34	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	8 e	12 abc	6 de	5 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
35	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	4 hij	4 no	2 ijk	1 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
36	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	5 gh	5 kl	3 hi	2 d	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
37	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	3 ij	4 no	3 hi	1 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
38	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	4 ghi	4 lmn	2 hij	2 cd	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
39	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	4 hij	4 mno	2 hij	1 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
40	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	4 g-j	5 klm	3 hi	2 cd	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
41	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	5 g	6 jk	3 gh	2 bc	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
42	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	5 gh	5 kl	3 gh	1 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
43	NONTREATED									0 k	0 q	0 m	0 f	0 a	0 a
LSD (P=.05)										1.1	1.1	0.8	0.5	0.0	0.0
Standard Deviation										0.8	0.8	0.5	0.4	0.0	0.0
CV										13.36	13.95	17.22	40.95	0.0	0.0
Replicate F										1.020	0.717	0.488	1.186	0.000	0.000
Replicate Prob(F)										0.3864	0.5434	0.6913	0.3177	1.0000	1.0000
Treatment F										108.453	97.135	94.045	60.561	0.000	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	1.0000	1.0000

Southern Illinois University

Soybean Response to Glyphosate Tank-Mixtures: Early Planting Date- May 1.

Trial ID: 12-3-W240
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: ISA - Glyph_Tm_Eplant-SIU.
2. Trial is to be maintained weed-free for the duration of the study.
   Blanket PRE application of Dual Magnum (1.27 lbai/A) plus Firstrate (0.031 lbai/A)
   was applied 5-19-12, then hand-weeded as needed.
   Ratings: CI (overall, stunting, chlorosis, necrosis) at 4, 7, 14, 28 and 56 DAT.
   CI/ stunting and plant heights at harvest.
3. Target planting date is May 1.
4. Yield is required. Measure weight of 200 seeds/plot.
5. DAT = Days after various postemergence applications
   Ratings at 4 days after the V2-3, V5-6, and R2 applications were on 6-19-12, 7-6-12, and 7-13-12, respectively.
   Ratings at 7 days after the V2-3, V5-6, and R2 applications were on 6-22-12, 7-9-12, and 7-16-12, respectively.
   Ratings at 14 days after the V2-3, V5-6, and R2 applications were on 6-29-12, 7-16-12, and 7-23-12, respectively.
   Ratings at 28 days after the V2-3, V5-6, and R2 applications were on 7-13-12, 7-30-12, and 8-6-12, respectively.
   Ratings at 56 days after the V2-3, V5-6, and R2 applications were on 8-10-12, 8-27-12, and 9-3-12, respectively.
6. Harvested 10-25-12, (2) 30 inch rows by 22 ft.

Southern Illinois University

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date- June 15.

Trial ID: 12-3-E265
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 6-15-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate the crop response and yield of soybean following three postemergence application timings of tank-mixtures with glyphosate under weed-free conditions.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG 4005 **Description:** RR
BBCH Scale: BSOY **Planting Date:** 6-15-12
Planting Method: SEEDED Seeded **Rate, Unit:** 75 LB/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** NA
Common Name: crop tolerance only

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 25 FT
Plot Area, Unit: 250 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 200 LB/A

Soil Description

% OM: 1.4 **Texture:** SIL SILT LOAM
pH: 5.9 **Soil Name:** PIERRON
CEC: 7

Additional Measured Elements

Element	Quantity	Unit
P1	97	LB/A
K	240	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date- June 15.

Trial ID: 12-3-E265
Location: Belleville Res. Center
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-24-12					7	DAY	42.6	74.3	F
2.	4-29-12	3.06	IN	RAIN	rain					
3.	4-30-12	0.66	IN	RAIN	rain					
4.	5-1-12	0.13	IN	RAIN	rain					
5.	5-1-12					7	DAY	33.5	76	F
6.	5-4-12	0.25	IN	RAIN	rain					
7.	5-7-12	0.29	IN	RAIN	rain					
8.	5-8-12					7	DAY	47.5	87.8	F
9.	5-15-12					7	DAY	37.7	81.3	F
10.	5-21-12	0.18	IN	RAIN	rain					
11.	5-22-12					7	DAY	47.6	82.3	F
12.	5-29-12					7	DAY	48.1	90	F
13.	5-30-12	0.07	IN	RAIN	rain					
14.	5-31-12	0.21	IN	RAIN	rain					
15.	6-5-12					7	DAY	50.2	90.1	F
16.	6-11-12	0.75	IN	RAIN	rain					
17.	6-12-12					7	DAY	52.4	93.6	F
18.	6-17-12	0.36	IN	RAIN	rain					
19.	6-19-12					7	DAY	56.3	94	F
20.	6-26-12					7	DAY	51.8	105.4	F
21.	7-3-12					7	DAY	68.9	104.7	F
22.	7-8-12	0.28	IN	RAIN	rain					
23.	7-10-12					7	DAY	63.4	95	F
24.	7-17-12					7	DAY	61	102.2	F
25.	7-24-12					7	DAY	61	103	F
26.	7-29-12	0.15	IN	RAIN	rain					
27.	7-31-12					7	DAY	60.2	99.1	F
28.	8-5-12	0.18	IN	RAIN	rain					
29.	8-7-12					7	DAY	50.2	99.8	F
30.	8-13-12	0.88	IN	RAIN	rain					
31.	8-14-12					7	DAY	51	95.6	F
32.	8-17-12	1.19	IN	RAIN	rain					
33.	8-21-12					7	DAY	54.7	94.2	F
34.	8-26-12	0.04	IN	RAIN	rain					
35.	8-27-12	1.66	IN	RAIN	rain					
36.	8-31-12	0.11	IN	RAIN	rain					

Application Description

	A	B	C
Application Date:	7-9-12	7-25-12	8-1-12
Time of Day:	10:00	6:00	8:00
Application Method:	Spray	Spray	Spray
Application Timing:	V2-3	V5-6	R2
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	TAR	TAR	TAR
Air Temperature, Unit:	83 F	80 F	82 F
% Relative Humidity:	57	74	69
Wind Velocity, Unit:	1 MPH	1 MPH	1 MPH
Wind Direction:	NW	SE	E
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	83 F	85 F	82 F
Soil Moisture:	BELNOR	BELNOR	BELNOR
% Cloud Cover:	80	0	30
Next Rain Occurred On:	7-29-12	7-29-12	8-4-12

Southern Illinois University

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date- June 15.

Trial ID: 12-3-E265
Location: Belleville Res. Center
Investigator: Bryan Young

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	V3	V6	R2
Stage Minimum, Percent:	V2	V5	R2
Stage Maximum, Percent:	V3	V6	R2
Height, Unit:	8 IN	10 IN	20 IN
Height Minimum, Maximum:	6 8	9 10	18 20

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	NA W DESC	NA W DESC	NA W DESC
Stage Majority, Percent:	NA	NA	NA

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date- June 15.

Trial ID: 12-3-E265
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-25-12 Height cm EOS	GLXMA 10-27-12 Moisture Percent	GLXMA 10-27-12 Test wt. lb/bu	GLXMA 10-27-12 Yield bu/A	GLXMA 10-27-12 200 Seed Wt gram
1	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	70 a	12.4 a	58.0 a	48 a-h	38.57 a-e
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
2	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	70 a	12.2 a	58.4 a	46 b-h	38.12 a-i
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	70 a	12.1 a	58.5 a	44 d-j	38.31 a-h
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	68 a	12.3 a	58.3 a	43 g-j	38.98 a-d
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	72 a	12.5 a	57.9 a	54 a-d	39.14 abc
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	70 a	12.2 a	58.3 a	47 b-h	38.36 a-h
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	74 a	12.3 a	58.1 a	52 a-g	39.23 ab
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	72 a	12.3 a	58.3 a	47 b-h	38.27 a-h
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	70 a	12.0 a	58.5 a	45 c-j	37.59 e-j
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	70 a	12.1 a	58.4 a	44 d-j	37.86 d-j
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	71 a	12.0 a	58.6 a	48 a-h	38.39 a-g
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	70 a	12.1 a	58.4 a	48 a-h	39.38 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	67 a	12.3 a	58.2 a	45 d-j	38.33 a-h
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	67 a	12.3 a	58.4 a	42 hij	38.56 a-f
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
15	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B	73 a	12.3 a	58.3 a	57 a	38.54 a-f
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
16	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B	67 a	12.2 a	58.5 a	45 d-j	38.60 a-e
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date- June 15.

Trial ID: 12-3-E265
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-25-12 Height cm EOS	GLXMA 10-27-12 Moisture Percent	GLXMA 10-27-12 Test wt. lb/bu	GLXMA 10-27-12 Yield bu/A	GLXMA 10-27-12 200 Seed Wt gram
17	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	68 a	12.4 a	58.1 a	53 a-e	37.52 e-j
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
18	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	68 a	12.4 a	58.1 a	46 c-i	38.46 a-g
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
19	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	71 a	12.3 a	58.1 a	49 a-h	37.63 e-j
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
20	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	68 a	12.4 a	58.1 a	42 hij	37.24 g-k
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
21	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	73 a	12.5 a	57.8 a	52 a-e	37.83 d-j
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
22	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	75 a	12.4 a	58.0 a	52 a-g	37.29 f-k
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
23	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	71 a	12.6 a	57.8 a	55 ab	38.03 b-i
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
24	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	69 a	12.3 a	58.2 a	47 b-h	37.30 f-k
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
25	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	68 a	12.4 a	58.0 a	46 b-i	38.22 a-h
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
26	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	72 a	12.3 a	58.1 a	46 c-i	38.28 a-h
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
27	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	71 a	12.3 a	58.1 a	50 a-h	38.43 a-g
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
28	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	70 a	12.2 a	58.3 a	45 d-j	37.61 e-j
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B					
29	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C	68 a	12.2 a	58.3 a	44 e-j	37.79 d-j
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
30	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C	69 a	12.1 a	58.5 a	43 f-j	37.91 c-j
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
31	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	75 a	12.5 a	58.0 a	51 a-h	37.10 h-k
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
32	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	71 a	12.3 a	58.2 a	48 a-h	36.74 jk
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date- June 15.

Trial ID: 12-3-E265
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-25-12 Height cm EOS	GLXMA 10-27-12 Moisture Percent	GLXMA 10-27-12 Test wt. lb/bu	GLXMA 10-27-12 Yield bu/A	GLXMA 10-27-12 200 Seed Wt gram
33	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	66 a	12.1 a	58.5 a	37 ij	36.11 k
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
34	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	67 a	12.2 a	58.3 a	36 j	36.90 ijk
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
35	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	71 a	12.3 a	58.1 a	50 a-h	38.04 b-i
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
36	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	72 a	12.3 a	58.2 a	49 a-h	37.80 d-j
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
37	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	70 a	12.2 a	58.3 a	46 c-i	37.98 b-j
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
38	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	70 a	12.1 a	58.4 a	47 b-h	38.22 a-h
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
39	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	70 a	12.3 a	58.1 a	48 a-h	37.09 h-k
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
40	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	69 a	12.5 a	58.0 a	49 a-h	38.01 b-i
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
41	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	70 a	12.2 a	58.3 a	48 a-h	37.34 e-k
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
42	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	75 a	12.4 a	58.0 a	54 abc	37.29 f-k
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C					
43	NONTREATED									75 a	12.3 a	58.0 a	52 a-f	37.43 e-j
LSD (P=.05)										5.6	0.44	0.57	9.3	1.268
Standard Deviation										4.0	0.31	0.41	6.6	0.906
CV										5.67	2.55	0.7	13.95	2.39
Replicate F										7.032	0.776	0.313	12.428	10.272
Replicate Prob(F)										0.0002	0.5097	0.8156	0.0001	0.0001
Treatment F										1.361	0.796	0.952	1.688	2.283
Treatment Prob(F)										0.0981	0.8007	0.5607	0.0140	0.0002

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date- June 15.

Trial ID: 12-3-E265
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Injury Percent 4 DAT	GLXMA Injury Percent 7 DAT	GLXMA Injury Percent 14 DAT	GLXMA Injury Percent 28 DAT	GLXMA Injury Percent 56 DAT	GLXMA 10-25-12 Injury Percent EOS
1	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	0 n	0 r	0 t	0 o	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
2	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	0 n	0 r	1 s	0 o	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	11 d	18 g	12 d	6 def	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	12 cd	18 g	12 d	6 cde	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	12 c	19 fg	12 d	7 bcd	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	15 a	21 e	15 c	7 bcd	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	5 i	8 jkl	5 lmn	3 i-m	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	8 g	10 ij	7 ij	4 f-j	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	9 f	14 h	9 ef	5 efg	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	9 f	10 ij	8 gh	4 f-i	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	4 kl	6 lmn	3 opq	2 mno	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	4 jk	7 k-n	5 lmn	2 k-n	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	5 ij	8 kl	5 lm	2 lmn	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	5 i	7 klm	5 kl	3 j-m	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
15	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B	0 n	0 r	0 t	0 o	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
16	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B	0 n	0 r	5 lmn	0 o	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date- June 15.

Trial ID: 12-3-E265
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Injury Percent 4 DAT	GLXMA Injury Percent 7 DAT	GLXMA Injury Percent 14 DAT	GLXMA Injury Percent 28 DAT	GLXMA Injury Percent 56 DAT	GLXMA 10-25-12 Injury Percent EOS
17	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	12 c	14 h	8 gh	3 h-m	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
18	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	13 b	14 h	10 e	5 e-h	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
19	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	14 a	15 h	9 fg	4 f-j	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
20	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	13 b	15 h	12 d	7 bcd	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
21	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	3 lm	3 opq	3 opq	0 o	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
22	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	3 lm	5 nop	6 jkl	0 o	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
23	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	4 jk	5 nop	6 jkl	1 no	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
24	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	3 lm	5 mno	5 lm	2 mno	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
25	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	2 m	2 qr	2 rs	0 o	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
26	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	3 m	2 qr	3 opq	0 o	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
27	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	3 lm	3 pq	3 opq	0 o	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
28	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	3 lm	3 pq	4 mno	0 o	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
29	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C	0 n	3 pq	3 pqr	0 o	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
30	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C	0 n	8 kl	2 qrs	0 o	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
31	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	9 ef	23 de	10 ef	7 bc	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
32	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	10 e	25 c	16 bc	8 b	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date- June 15.

Trial ID: 12-3-E265
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Injury Percent 4 DAT	GLXMA Injury Percent 7 DAT	GLXMA Injury Percent 14 DAT	GLXMA Injury Percent 28 DAT	GLXMA Injury Percent 56 DAT	GLXMA 10-25-12 Injury Percent EOS
33	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	9 ef	28 b	16 b	10 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
34	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	9 ef	35 a	18 a	10 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
35	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	6 h	14 h	5 lm	3 i-m	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
36	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	7 g	21 ef	5 kl	4 g-l	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
37	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	7 gh	19 fg	6 ijk	4 g-k	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
38	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	7 gh	24 cd	7 hi	5 e-h	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
39	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	4 kl	9 jk	4 nop	2 k-n	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
40	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	4 kl	15 h	5 lmn	2 lmn	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
41	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	5 ij	11 i	5 lmn	3 j-m	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
42	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	5 i	18 g	6 jkl	3 h-m	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
43	NONTREATED									0 n	0 r	0 t	0 o	0 a	0 a
LSD (P=.05)										0.8	2.0	1.2	1.6	0.0	0.0
Standard Deviation										0.6	1.5	0.9	1.1	0.0	0.0
CV										9.38	13.06	13.85	37.8	0.0	0.0
Replicate F										2.904	1.575	0.079	0.017	0.000	0.000
Replicate Prob(F)										0.0375	0.1987	0.9712	0.9971	1.0000	1.0000
Treatment F										246.631	140.415	102.621	25.489	0.000	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	1.0000	1.0000

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date- June 15.

Trial ID: 12-3-E265
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Stunt Percent 4 DAT	GLXMA Stunt Percent 7 DAT	GLXMA Stunt Percent 14 DAT	GLXMA Stunt Percent 28 DAT	GLXMA Stunt Percent 56 DAT	GLXMA 10-25-12 Stunt Percent EOS
1	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	0 a	0 f	0 c	0 c	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
2	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	0 a	0 f	0 c	0 c	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	0 a	0 f	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	0 a	0 f	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	0 a	0 f	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	0 a	1 ef	1 bc	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	0 a	0 f	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	0 a	0 f	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	0 a	0 f	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	0 a	0 f	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	0 a	0 f	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	0 a	0 f	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	0 a	0 f	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	0 a	0 f	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
15	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B	0 a	0 f	0 c	0 c	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
16	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B	0 a	0 f	0 c	0 c	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date- June 15.

Trial ID: 12-3-E265
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Stunt Percent 4 DAT	GLXMA Stunt Percent 7 DAT	GLXMA Stunt Percent 14 DAT	GLXMA Stunt Percent 28 DAT	GLXMA Stunt Percent 56 DAT	GLXMA 10-25-12 Stunt Percent EOS
17	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	0 a	1 ef	1 bc	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
18	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	0 a	1 f	1 bc	1 bc	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
19	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	0 a	1 f	1 bc	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
20	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	0 a	0 f	0 c	2 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
21	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	0 a	0 f	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
22	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	0 a	0 f	1 b	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
23	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	0 a	0 f	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
24	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	0 a	0 f	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
25	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	0 a	0 f	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
26	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	0 a	0 f	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
27	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	0 a	0 f	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
28	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	0 a	0 f	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
29	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C	0 a	0 f	0 c	0 c	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
30	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C	0 a	1 f	0 c	0 c	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
31	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	0 a	4 cd	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
32	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	0 a	5 c	1 bc	2 ab	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date- June 15.

Trial ID: 12-3-E265
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Stunt Percent 4 DAT	GLXMA Stunt Percent 7 DAT	GLXMA Stunt Percent 14 DAT	GLXMA Stunt Percent 28 DAT	GLXMA Stunt Percent 56 DAT	GLXMA 10-25-12 Stunt Percent EOS
33	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	0 a	7 b	2 a	2 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
34	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	0 a	10 a	2 a	2 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
35	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	0 a	1 ef	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
36	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	0 a	1 f	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
37	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	0 a	2 de	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
38	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	0 a	3 d	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
39	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	0 a	0 f	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
40	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	0 a	1 ef	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
41	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	0 a	1 ef	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
42	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	0 a	0 f	0 c	0 c	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
43	NONTREATED									0 a	0 f	0 c	0 c	0 a	0 a
LSD (P=.05)										0.0	1.5	0.8	0.9	0.0	0.0
Standard Deviation										0.0	1.1	0.6	0.7	0.0	0.0
CV										0.0	119.28	273.39	361.74	0.0	0.0
Replicate F										0.000	0.770	0.069	1.327	0.000	0.000
Replicate Prob(F)										1.0000	0.5129	0.9764	0.2687	1.0000	1.0000
Treatment F										0.000	14.076	3.318	2.586	0.000	0.000
Treatment Prob(F)										1.0000	0.0001	0.0001	0.0001	1.0000	1.0000

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date- June 15.

Trial ID: 12-3-E265
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Chlorosis Percent 4 DAT	GLXMA Chlorosis Percent 7 DAT	GLXMA Chlorosis Percent 14 DAT	GLXMA Chlorosis Percent 28 DAT	GLXMA Chlorosis Percent 56 DAT	GLXMA 10-25-12 Chlorosis Percent EOS
1	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	0 d	0 l	0 k	0 e	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
2	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	0 d	0 l	1 ij	0 e	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	0 d	0 l	0 k	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	0 d	0 l	0 k	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	0 d	0 l	0 k	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	0 d	0 l	0 k	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	0 cd	0 l	0 k	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	2 a	1 jkl	0 k	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	1 b	1 jkl	0 k	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	1 b	0 l	0 k	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	0 d	0 l	0 k	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	0 d	0 l	0 k	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	0 d	0 l	0 k	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	0 d	0 l	0 k	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
15	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B	0 d	0 l	0 k	0 e	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
16	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B	0 d	0 l	5 ab	0 e	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date- June 15.

Trial ID: 12-3-E265
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Chlorosis Percent 4 DAT	GLXMA Chlorosis Percent 7 DAT	GLXMA Chlorosis Percent 14 DAT	GLXMA Chlorosis Percent 28 DAT	GLXMA Chlorosis Percent 56 DAT	GLXMA 10-25-12 Chlorosis Percent EOS
17	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	0 d	0 l	1 jk	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
18	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	0 d	0 l	1 jk	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
19	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	0 d	0 l	1 jk	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
20	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	0 d	1 kl	3 e-h	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
21	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	0 d	1 jkl	1 jk	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
22	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	0 d	2 ijk	2 fgh	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
23	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	0 d	2 ijk	2 fgh	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
24	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	0 d	2 ij	2 hi	1 de	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
25	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	0 d	0 l	0 k	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
26	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	0 d	0 l	1 jk	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
27	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	0 d	0 l	0 k	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
28	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	0 d	0 l	0 k	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
29	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C	0 d	3 hi	3 e-h	0 e	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
30	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C	0 d	7 g	2 fgh	0 e	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
31	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	0 d	7 g	2 ghi	1 d	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
32	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	0 d	11 de	4 cd	1 de	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date- June 15.

Trial ID: 12-3-E265
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Chlorosis Percent 4 DAT	GLXMA Chlorosis Percent 7 DAT	GLXMA Chlorosis Percent 14 DAT	GLXMA Chlorosis Percent 28 DAT	GLXMA Chlorosis Percent 56 DAT	GLXMA 10-25-12 Chlorosis Percent EOS
33	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	0 d	9 f	3 cde	1 cd	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
34	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	1 bc	13 b	4 bc	1 cd	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
35	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	2 a	7 g	3 d-g	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
36	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	2 a	12 bc	3 def	2 bc	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
37	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	2 a	10 def	3 cde	2 b	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
38	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	2 a	14 a	5 a	3 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
39	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	0 d	4 h	1 ij	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
40	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	0 d	10 ef	3 e-h	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
41	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	0 d	4 h	2 ghi	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
42	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	0 d	11 cd	3 d-g	0 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
43	NONTREATED									0 d	0 l	0 k	0 e	0 a	0 a
LSD (P=.05)										0.4	1.4	1.0	0.6	0.0	0.0
Standard Deviation										0.3	1.0	0.7	0.4	0.0	0.0
CV										123.09	33.61	53.1	177.55	0.0	0.0
Replicate F										0.429	0.376	1.749	2.196	0.000	0.000
Replicate Prob(F)										0.7326	0.7704	0.1604	0.0917	1.0000	1.0000
Treatment F										13.241	76.464	17.135	8.437	0.000	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	1.0000	1.0000

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date- June 15.

Trial ID: 12-3-E265
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Necrosis Percent 4 DAT	GLXMA Necrosis Percent 7 DAT	GLXMA Necrosis Percent 14 DAT	GLXMA Necrosis Percent 28 DAT	GLXMA Necrosis Percent 56 DAT	GLXMA 10-25-12 Necrosis Percent EOS
1	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	0 p	0 r	0 l	0 i	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
2	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	0 p	0 r	0 l	0 i	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	10 d	16 d	9 ab	5 bc	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	10 d	16 cd	9 ab	5 abc	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	11 cd	17 c	10 a	6 ab	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	13 ab	19 b	10 a	6 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	5 gh	7 ijk	5 gh	3 ef	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	6 g	9 h	7 de	4 cd	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	7 f	13 ef	8 bc	5 bc	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	7 f	11 g	8 cd	4 cd	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	4 kl	6 klm	3 ij	2 fgh	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	4 jk	7 jkl	5 gh	2 efg	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	5 hi	8 ij	5 gh	2 efg	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	5 gh	7 ij	5 fg	3 ef	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A						
15	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B	0 p	0 r	0 l	0 i	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
16	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B	0 p	0 r	0 l	0 i	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date- June 15.

Trial ID: 12-3-E265
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Necrosis Percent 4 DAT	GLXMA Necrosis Percent 7 DAT	GLXMA Necrosis Percent 14 DAT	GLXMA Necrosis Percent 28 DAT	GLXMA Necrosis Percent 56 DAT	GLXMA 10-25-12 Necrosis Percent EOS
17	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	11 c	12 fg	6 ef	1 gh	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
18	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V5-6	B	12 b	13 ef	7 cd	2 efg	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
19	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	13 a	13 e	6 ef	3 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
20	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V5-6	B	12 b	13 ef	8 bc	3 de	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
21	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	2 o	2 q	2 jk	0 i	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
22	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V5-6	B	2 o	2 pq	2 jk	0 i	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
23	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	3 lm	2 pq	2 jk	0 i	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
24	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V5-6	B	2 o	2 pq	2 jk	1 hi	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
25	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	2 no	2 pq	2 k	0 i	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
26	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V5-6	B	3 mno	2 pq	3 ij	0 i	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
27	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	3 lm	3 op	3 ij	0 i	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
28	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V5-6	B	3 mn	3 op	4 hi	0 i	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V5-6	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V5-6	B						
29	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C	0 p	0 r	0 l	0 i	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
30	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C	0 p	0 r	0 l	0 i	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
31	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	7 ef	16 d	6 efg	5 bc	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
32	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	R2	C	8 e	16 cd	8 c	5 bc	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date- June 15.

Trial ID: 12-3-E265
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Necrosis Percent 4 DAT	GLXMA Necrosis Percent 7 DAT	GLXMA Necrosis Percent 14 DAT	GLXMA Necrosis Percent 28 DAT	GLXMA Necrosis Percent 56 DAT	GLXMA 10-25-12 Necrosis Percent EOS
33	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	8 ef	16 d	7 de	6 ab	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
34	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	R2	C	7 f	21 a	5 fg	5 ab	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
35	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	4 kl	4 no	3 ij	3 e	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
36	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	R2	C	5 hi	7 jkl	3 ij	2 efg	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
37	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	4 jk	6 klm	3 ij	2 efg	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
38	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	R2	C	4 ij	5 m	3 ij	2 efg	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
39	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	4 kl	5 mn	3 jk	2 fgh	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
40	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	R2	C	4 kl	5 m	2 jk	2 fgh	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
41	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	5 hij	6 lm	3 jk	3 ef	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
42	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	R2	C	5 gh	8 hi	3 jk	3 de	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	R2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	R2	C						
43	NONTREATED									0 p	0 r	0 l	0 i	0 a	0 a
LSD (P=.05)										0.7	1.2	1.2	1.1	0.0	0.0
Standard Deviation										0.5	0.8	0.9	0.8	0.0	0.0
CV										10.22	11.17	21.42	37.84	0.0	0.0
Replicate F										3.118	1.317	2.102	1.784	0.000	0.000
Replicate Prob(F)										0.0285	0.2717	0.1032	0.1535	1.0000	1.0000
Treatment F										221.773	215.780	46.975	22.822	0.000	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	1.0000	1.0000

Southern Illinois University

Soybean Response to Glyphosate Tank-Mixtures: Late Planting Date- June 15.

Trial ID: 12-3-E265
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: ISA - Glyph_Tm_Lplant-SIU.
2. Trial is to be maintained weed-free for the duration of the study.
   Blanket PRE application of Dual Magnum (1.27 lbai/A) plus Firstrate (0.031 lbai/A)
   was applied 6-15-12, then hand-weeded as needed.
   Ratings: CI (overall, stunting, chlorosis, necrosis) at 4, 7, 14, 28 and 56 DAT.
   CI/ stunting and plant heights at harvest.
3. Target planting date is June 15.
4. Yield is required. Measure weight of 200 seeds/plot.
5. DAT = Days after various postemergence applications
   Ratings at 4 days after the V2-3, V5-6, and R2 applications were on 7-13-12, 7-29-12, and 8-5-12, respectively.
   Ratings at 7 days after the V2-3, V5-6, and R2 applications were on 7-16-12, 8-1-12, and 8-8-12, respectively.
   Ratings at 14 days after the V2-3, V5-6, and R2 applications were on 7-23-12, 8-8-12, and 8-15-12, respectively.
   Ratings at 28 days after the V2-3, V5-6, and R2 applications were on 8-6-12, 8-22-12, and 8-29-12, respectively.
   Ratings at 56 days after the V2-3, V5-6, and R2 applications were on 9-3-12, 9-19-12, and 9-26-12, respectively.
6. Harvested 10-27-12, (2) 30 inch rows by 22 ft.

Residual Herbicide Tank-Mixtures: Weed Free Study - SIU.

Trial ID: 12-9B-N270
Location: Belleville Res Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-19-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate the crop response and yield of soybean following a preplant application of tank-mixtures of residual herbicides under weed-free conditions.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG 4005 **Description:** RR
BBCH Scale: BSOY **Planting Date:** 5-19-12
Planting Method: SEEDED **Rate, Unit:** 75 LB/A
Depth, Unit: 1.0 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** NA
Common Name: crop tolerance only

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 25 FT
Plot Area, Unit: 250 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	NONE	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 50 LB/A, K2O 100 LB/A

Soil Description

% OM: 1.9 **Texture:** SIL SILT LOAM
pH: 6.4 **Soil Name:** BETHALTO
CEC: 11

Additional Measured Elements

Element	Quantity	Unit
P1	68	LB/A
K	349	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Residual Herbicide Tank-Mixtures: Weed Free Study - SIU.

Trial ID: 12-9B-N270
Location: Belleville Res Center
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-24-12					7	DAY	42.6	74.3	F
2.	4-29-12	3.06	IN	RAIN	rain					
3.	4-30-12	0.66	IN	RAIN	rain					
4.	5-1-12	0.13	IN	RAIN	rain					
5.	5-1-12					7	DAY	33.5	76	F
6.	5-4-12	0.25	IN	RAIN	rain					
7.	5-7-12	0.29	IN	RAIN	rain					
8.	5-8-12					7	DAY	47.5	87.8	F
9.	5-15-12					7	DAY	37.7	81.3	F
10.	5-21-12	0.18	IN	RAIN	rain					
11.	5-22-12					7	DAY	47.6	82.3	F
12.	5-29-12					7	DAY	48.1	90	F
13.	5-30-12	0.07	IN	RAIN	rain					
14.	5-31-12	0.21	IN	RAIN	rain					
15.	6-5-12					7	DAY	50.2	90.1	F
16.	6-11-12	0.75	IN	RAIN	rain					
17.	6-12-12					7	DAY	52.4	93.6	F
18.	6-17-12	0.36	IN	RAIN	rain					
19.	6-19-12					7	DAY	56.3	94	F
20.	6-26-12					7	DAY	51.8	105.4	F
21.	7-3-12					7	DAY	68.9	104.7	F
22.	7-8-12	0.28	IN	RAIN	rain					
23.	7-10-12					7	DAY	63.4	95	F
24.	7-17-12					7	DAY	61	102.2	F
25.	7-24-12					7	DAY	61	103	F
26.	7-29-12	0.15	IN	RAIN	rain					
27.	7-31-12					7	DAY	60.2	99.1	F
28.	8-5-12	0.18	IN	RAIN	rain					
29.	8-7-12					7	DAY	50.2	99.8	F
30.	8-13-12	0.88	IN	RAIN	rain					
31.	8-14-12					7	DAY	51	95.6	F
32.	8-17-12	1.19	IN	RAIN	rain					
33.	8-21-12					7	DAY	54.7	94.2	F
34.	8-26-12	0.04	IN	RAIN	rain					
35.	8-27-12	1.66	IN	RAIN	rain					
36.	8-31-12	0.11	IN	RAIN	rain					

Application Description

	A
Application Date:	5-19-12
Time of Day:	16:00
Application Method:	Spray
Application Timing:	0-7DBP
Application Placement:	BROFOL
Applied By:	LAH
Air Temperature, Unit:	88 F
% Relative Humidity:	38
Wind Velocity, Unit:	8 MPH
Wind Direction:	S
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	63 F
Soil Moisture:	BELNOR
% Cloud Cover:	40
Next Rain Occurred On:	5-21-12

Southern Illinois University

Residual Herbicide Tank-Mixtures: Weed Free Study - SIU.

Trial ID: 12-9B-N270
Location: Belleville Res Center
Investigator: Bryan Young

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	NA W DESC
Stage Majority, Percent:	NA

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	10 FT
Spray Volume, Unit:	15 GPA

Residual Herbicide Tank-Mixtures: Weed Free Study - SIU.

Trial ID: 12-9B-N270
Location: Belleville Res Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-29-12 Moisture Percent	GLXMA 10-29-12 Test wt. lb/bu	GLXMA 10-29-12 Yield bu/A	GLXMA 6-9-12 Injury Percent 3 WAP	GLXMA 6-30-12 Injury Percent 6 WAP	GLXMA 7-21-12 Injury Percent 9 WAP
1	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	11.7 a	58.6 a	80 a	0 g	0 c	0 a
2	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	11.7 a	58.5 a	88 a	0 g	0 c	0 a
3	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	11.7 a	58.7 a	80 a	0 g	0 c	0 a
4	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	11.7 a	58.6 a	82 a	5 cde	0 c	0 a
5	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	11.6 a	58.8 a	84 a	0 g	0 c	0 a
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	0-7DBP	A						
6	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	11.7 a	58.6 a	82 a	2 fg	0 c	0 a
	BOUNDARY	6.5	EC	1.7	lb ai/a	2.1	pt/a	0-7DBP	A						
7	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	11.6 a	58.7 a	80 a	2 fg	0 c	0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	0-7DBP	A						
8	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	11.6 a	58.7 a	82 a	0 g	0 c	0 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1.0	fl oz/a	0-7DBP	A						
9	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	11.6 a	58.6 a	78 a	0 g	0 c	0 a
	KIH-485	85	WG	0.106	lb ai/a	2	oz/a	0-7DBP	A						
10	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	11.7 a	58.6 a	83 a	2 fg	0 c	0 a
	PROWL H2O	3.8	CS	2.38	lb ai/a	5	pt/a	0-7DBP	A						
11	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	11.8 a	58.6 a	84 a	3 ef	1 bc	0 a
	BOUNDARY	6.5	EC	3.4	lb ai/a	4.2	pt/a	0-7DBP	A						
12	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	11.8 a	58.4 a	82 a	4 de	1 bc	0 a
	PREFIX	5.29	EC	3.3	lb ai/a	5.0	pt/a	0-7DBP	A						
13	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	11.6 a	58.8 a	80 a	0 g	0 c	0 a
	SHARPEN	2.85	SC	0.0445	lb ai/a	2.0	fl oz/a	0-7DBP	A						
14	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	11.6 a	58.6 a	80 a	0 g	0 c	0 a
	KIH-485	85	WG	0.213	lb ai/a	4	oz/a	0-7DBP	A						
15	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	11.6 a	58.7 a	81 a	5 cde	0 c	0 a
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	0-7DBP	A						
16	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	11.6 a	58.7 a	83 a	4 de	0 c	0 a
	BOUNDARY	6.5	EC	1.7	lb ai/a	2.1	pt/a	0-7DBP	A						
17	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	11.6 a	58.7 a	78 a	5 cde	1 abc	0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	0-7DBP	A						
18	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	11.6 a	58.7 a	82 a	2 f	0 c	0 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1.0	fl oz/a	0-7DBP	A						
19	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	11.7 a	58.6 a	81 a	0 g	0 c	0 a
	KIH-485	85	WG	0.106	lb ai/a	2	oz/a	0-7DBP	A						
20	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	11.6 a	58.7 a	87 a	6 bc	0 c	0 a
	PROWL H2O	3.8	CS	2.38	lb ai/a	5	pt/a	0-7DBP	A						

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Residual Herbicide Tank-Mixtures: Weed Free Study - SIU.

Trial ID: 12-9B-N270
Location: Belleville Res Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-29-12 Moisture Percent	GLXMA 10-29-12 Test wt. lb/bu	GLXMA 10-29-12 Yield bu/A	GLXMA 6-9-12 Injury Percent 3 WAP	GLXMA 6-30-12 Injury Percent 6 WAP	GLXMA 7-21-12 Injury Percent 9 WAP
21	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	11.6 a	58.7 a	80 a	9 a	3 a	0 a
	BOUNDARY	6.5	EC	3.4	lb ai/a	4.2	pt/a	0-7DBP	A						
22	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	11.4 a	59.0 a	80 a	7 ab	1 bc	0 a
	PREFIX	5.29	EC	3.3	lb ai/a	5.0	pt/a	0-7DBP	A						
23	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	11.6 a	58.7 a	79 a	7 b	0 c	0 a
	SHARPEN	2.85	SC	0.0445	lb ai/a	2.0	fl oz/a	0-7DBP	A						
24	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	11.6 a	58.8 a	82 a	6 bcd	2 ab	0 a
	KIH-485	85	WG	0.213	lb ai/a	4	oz/a	0-7DBP	A						
25	NONTREATED									11.9 a	58.4 a	80 a	0 g	0 c	0 a
LSD (P=.05)										0.38	0.57	6.0	1.9	1.3	0.0
Standard Deviation										0.27	0.40	4.3	1.4	0.9	0.0
CV										2.32	0.68	5.22	51.78	315.84	0.0
Replicate F										0.551	0.144	13.760	4.615	3.104	0.000
Replicate Prob(F)										0.6489	0.9329	0.0001	0.0052	0.0318	1.0000
Treatment F										0.540	0.361	1.332	16.606	1.764	0.000
Treatment Prob(F)										0.9537	0.9966	0.1759	0.0001	0.0343	1.0000

Residual Herbicide Tank-Mixtures: Weed Free Study - SIU.

Trial ID: 12-9B-N270
Location: Belleville Res Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-9-12 Stunt Percent 3 WAP	GLXMA 6-30-12 Stunt Percent 6 WAP	GLXMA 7-21-12 Stunt Percent 9 WAP	GLXMA 6-9-12 Chlorosis Percent 3 WAP	GLXMA 6-30-12 Chlorosis Percent 6 WAP	GLXMA 7-21-12 Chlorosis Percent 9 WAP
1	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	0 d	0 c	0 a	0 a	0 a	0 a
2	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	0 d	0 c	0 a	0 a	0 a	0 a
3	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	0 d	0 c	0 a	0 a	0 a	0 a
4	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	2 bcd	0 c	0 a	0 a	0 a	0 a
5	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	0 d	0 c	0 a	0 a	0 a	0 a
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	0-7DBP	A						
6	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	0 d	0 c	0 a	0 a	0 a	0 a
	BOUNDARY	6.5	EC	1.7	lb ai/a	2.1	pt/a	0-7DBP	A						
7	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	0 d	0 c	0 a	0 a	0 a	0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	0-7DBP	A						
8	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	0 d	0 c	0 a	0 a	0 a	0 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1.0	fl oz/a	0-7DBP	A						
9	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	0 d	0 c	0 a	0 a	0 a	0 a
	KIH-485	85	WG	0.106	lb ai/a	2	oz/a	0-7DBP	A						
10	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	0 d	0 c	0 a	0 a	0 a	0 a
	PROWL H2O	3.8	CS	2.38	lb ai/a	5	pt/a	0-7DBP	A						
11	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	2 bcd	1 bc	0 a	0 a	0 a	0 a
	BOUNDARY	6.5	EC	3.4	lb ai/a	4.2	pt/a	0-7DBP	A						
12	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	2 bcd	1 bc	0 a	0 a	0 a	0 a
	PREFIX	5.29	EC	3.3	lb ai/a	5.0	pt/a	0-7DBP	A						
13	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	0 d	0 c	0 a	0 a	0 a	0 a
	SHARPEN	2.85	SC	0.0445	lb ai/a	2.0	fl oz/a	0-7DBP	A						
14	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	0 d	0 c	0 a	0 a	0 a	0 a
	KIH-485	85	WG	0.213	lb ai/a	4	oz/a	0-7DBP	A						
15	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	2 abc	0 c	0 a	0 a	0 a	0 a
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	0-7DBP	A						
16	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	2 bcd	0 c	0 a	0 a	0 a	0 a
	BOUNDARY	6.5	EC	1.7	lb ai/a	2.1	pt/a	0-7DBP	A						
17	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	1 cd	1 abc	0 a	0 a	0 a	0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	0-7DBP	A						
18	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	1 cd	0 c	0 a	0 a	0 a	0 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1.0	fl oz/a	0-7DBP	A						
19	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	0 d	0 c	0 a	0 a	0 a	0 a
	KIH-485	85	WG	0.106	lb ai/a	2	oz/a	0-7DBP	A						
20	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	3 ab	0 c	0 a	0 a	0 a	0 a
	PROWL H2O	3.8	CS	2.38	lb ai/a	5	pt/a	0-7DBP	A						

Residual Herbicide Tank-Mixtures: Weed Free Study - SIU.

Trial ID: 12-9B-N270
Location: Belleville Res Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-9-12 Stunt Percent 3 WAP	GLXMA 6-30-12 Stunt Percent 6 WAP	GLXMA 7-21-12 Stunt Percent 9 WAP	GLXMA 6-9-12 Chlorosis Percent 3 WAP	GLXMA 6-30-12 Chlorosis Percent 6 WAP	GLXMA 7-21-12 Chlorosis Percent 9 WAP
21	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	3 a	3 a	0 a	0 a	0 a	0 a
	BOUNDARY	6.5	EC	3.4	lb ai/a	4.2	pt/a	0-7DBP	A						
22	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	4 a	1 bc	0 a	0 a	0 a	0 a
	PREFIX	5.29	EC	3.3	lb ai/a	5.0	pt/a	0-7DBP	A						
23	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	3 ab	0 c	0 a	0 a	0 a	0 a
	SHARPEN	2.85	SC	0.0445	lb ai/a	2.0	fl oz/a	0-7DBP	A						
24	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	2 abc	2 ab	0 a	0 a	0 a	0 a
	KIH-485	85	WG	0.213	lb ai/a	4	oz/a	0-7DBP	A						
25	NONTREATED									0 d	0 c	0 a	0 a	0 a	0 a
LSD (P=.05)										1.5	1.3	0.0	0.0	0.0	0.0
Standard Deviation										1.1	0.9	0.0	0.0	0.0	0.0
CV										110.55	315.84	0.0	0.0	0.0	0.0
Replicate F										3.464	3.104	0.000	0.000	0.000	0.000
Replicate Prob(F)										0.0206	0.0318	1.0000	1.0000	1.0000	1.0000
Treatment F										5.078	1.764	0.000	0.000	0.000	0.000
Treatment Prob(F)										0.0001	0.0343	1.0000	1.0000	1.0000	1.0000

Residual Herbicide Tank-Mixtures: Weed Free Study - SIU.

Trial ID: 12-9B-N270
Location: Belleville Res Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-9-12 Necrosis Percent 3 WAP	GLXMA 6-30-12 Necrosis Percent 6 WAP	GLXMA 7-21-12 Necrosis Percent 9 WAP
1	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	0 a	0 a	0 a
2	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	0 a	0 a	0 a
3	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	0 a	0 a	0 a
4	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	0 a	0 a	0 a
5	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	0 a	0 a	0 a
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	0-7DBP	A			
6	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	0 a	0 a	0 a
	BOUNDARY	6.5	EC	1.7	lb ai/a	2.1	pt/a	0-7DBP	A			
7	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	0 a	0 a	0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	0-7DBP	A			
8	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	0 a	0 a	0 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1.0	fl oz/a	0-7DBP	A			
9	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	0 a	0 a	0 a
	KIH-485	85	WG	0.106	lb ai/a	2	oz/a	0-7DBP	A			
10	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	0 a	0 a	0 a
	PROWL H2O	3.8	CS	2.38	lb ai/a	5	pt/a	0-7DBP	A			
11	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	0 a	0 a	0 a
	BOUNDARY	6.5	EC	3.4	lb ai/a	4.2	pt/a	0-7DBP	A			
12	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	0 a	0 a	0 a
	PREFIX	5.29	EC	3.3	lb ai/a	5.0	pt/a	0-7DBP	A			
13	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	0 a	0 a	0 a
	SHARPEN	2.85	SC	0.0445	lb ai/a	2.0	fl oz/a	0-7DBP	A			
14	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	0 a	0 a	0 a
	KIH-485	85	WG	0.213	lb ai/a	4	oz/a	0-7DBP	A			
15	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	0 a	0 a	0 a
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	0-7DBP	A			
16	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	0 a	0 a	0 a
	BOUNDARY	6.5	EC	1.7	lb ai/a	2.1	pt/a	0-7DBP	A			
17	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	0 a	0 a	0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	0-7DBP	A			
18	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	0 a	0 a	0 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1.0	fl oz/a	0-7DBP	A			
19	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	0 a	0 a	0 a
	KIH-485	85	WG	0.106	lb ai/a	2	oz/a	0-7DBP	A			
20	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	0 a	0 a	0 a
	PROWL H2O	3.8	CS	2.38	lb ai/a	5	pt/a	0-7DBP	A			

Residual Herbicide Tank-Mixtures: Weed Free Study - SIU.

Trial ID: 12-9B-N270
Location: Belleville Res Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-9-12 Necrosis Percent 3 WAP	GLXMA 6-30-12 Necrosis Percent 6 WAP	GLXMA 7-21-12 Necrosis Percent 9 WAP
21	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	0 a	0 a	0 a
	BOUNDARY	6.5	EC	3.4	lb ai/a	4.2	pt/a	0-7DBP	A			
22	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	0 a	0 a	0 a
	PREFIX	5.29	EC	3.3	lb ai/a	5.0	pt/a	0-7DBP	A			
23	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	0 a	0 a	0 a
	SHARPEN	2.85	SC	0.0445	lb ai/a	2.0	fl oz/a	0-7DBP	A			
24	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	0 a	0 a	0 a
	KIH-485	85	WG	0.213	lb ai/a	4	oz/a	0-7DBP	A			
25	NONTREATED									0 a	0 a	0 a
LSD (P=.05)										0.0	0.0	0.0
Standard Deviation										0.0	0.0	0.0
CV										0.0	0.0	0.0
Replicate F										0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000

Residual Herbicide Tank-Mixtures: Weed Free Study - SIU.

Trial ID: 12-9B-N270
Location: Belleville Res Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-7-12 Plants 000/A 3 WAP	GLXMA 6-28-12 Plants 000/A 6 WAP	GLXMA 10-11-12 Plants 000/A Harvest	GLXMA 10-29-12 200 Seed wt gram Harvest	GLXMA 6-7-12 V1 Percent 3 WAP	GLXMA 6-28-12 R1 Percent 6 WAP	GLXMA 7-9-12 R2 Percent 7 WAP	GLXMA 7-9-12 R Stage 7 WAP
1	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	82.9 a	138.6 a	129.3 a	40.9 a	33 a	60 abc	100 a	2.0 a
2	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	109.4 a	143.3 a	126.0 a	41.5 a	70 a	63 ab	98 a	2.0 a
3	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	102.1 a	147.2 a	124.7 a	40.6 a	38 a	40 a-e	100 a	2.0 a
4	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	132.6 a	152.5 a	134.0 a	39.9 a	55 a	43 a-e	100 a	2.0 a
5	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	75.6 a	134.0 a	112.7 a	39.9 a	30 a	43 a-e	100 a	2.0 a
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	0-7DBP	A								
6	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	96.2 a	144.6 a	130.7 a	40.2 a	35 a	55 a-d	100 a	2.0 a
	BOUNDARY	6.5	EC	1.7	lb ai/a	2.1	pt/a	0-7DBP	A								
7	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	136.0 a	154.5 a	139.3 a	40.4 a	40 a	38 a-f	100 a	2.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	0-7DBP	A								
8	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	73.6 a	136.0 a	115.4 a	40.6 a	35 a	45 a-e	88 a	1.8 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1.0	fl oz/a	0-7DBP	A								
9	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	82.9 a	133.3 a	111.4 a	40.3 a	58 a	35 b-f	100 a	2.0 a
	KIH-485	85	WG	0.106	lb ai/a	2	oz/a	0-7DBP	A								
10	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	16.6 a	117.4 a	100.1 a	40.2 a	13 a	18 ef	90 a	1.8 a
	PROWL H2O	3.8	CS	2.38	lb ai/a	5	pt/a	0-7DBP	A								
11	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	114.7 a	145.2 a	125.3 a	41.0 a	43 a	38 a-f	100 a	2.0 a
	BOUNDARY	6.5	EC	3.4	lb ai/a	4.2	pt/a	0-7DBP	A								
12	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	62.3 a	130.0 a	108.1 a	41.7 a	33 a	33 c-f	93 a	1.9 a
	PREFIX	5.29	EC	3.3	lb ai/a	5.0	pt/a	0-7DBP	A								
13	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	138.6 a	156.5 a	139.9 a	41.1 a	75 a	55 a-d	100 a	2.0 a
	SHARPEN	2.85	SC	0.0445	lb ai/a	2.0	fl oz/a	0-7DBP	A								
14	SPARTAN SC	4	SC	0.5	lb ai/a	16	fl oz/a	0-7DBP	A	36.5 a	129.3 a	108.8 a	41.8 a	15 a	38 a-f	88 a	1.8 a
	KIH-485	85	WG	0.213	lb ai/a	4	oz/a	0-7DBP	A								
15	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	74.9 a	136.6 a	118.1 a	40.9 a	33 a	45 a-e	93 a	1.9 a
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	0-7DBP	A								
16	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	82.9 a	136.6 a	117.4 a	41.7 a	40 a	33 c-f	100 a	2.1 a
	BOUNDARY	6.5	EC	1.7	lb ai/a	2.1	pt/a	0-7DBP	A								
17	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	77.6 a	141.9 a	118.7 a	40.5 a	43 a	38 a-f	100 a	2.0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	0-7DBP	A								
18	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	57.7 a	143.9 a	123.4 a	40.2 a	35 a	53 a-d	100 a	2.0 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1.0	fl oz/a	0-7DBP	A								
19	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	88.9 a	139.9 a	122.7 a	42.1 a	40 a	58 abc	100 a	2.0 a
	KIH-485	85	WG	0.106	lb ai/a	2	oz/a	0-7DBP	A								
20	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	94.8 a	150.5 a	131.3 a	41.4 a	18 a	23 ef	100 a	2.0 a
	PROWL H2O	3.8	CS	2.38	lb ai/a	5	pt/a	0-7DBP	A								

Residual Herbicide Tank-Mixtures: Weed Free Study - SIU.

Trial ID: 12-9B-N270
Location: Belleville Res Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-7-12 Plants 000/A 3 WAP	GLXMA 6-28-12 Plants 000/A 6 WAP	GLXMA 10-11-12 Plants 000/A Harvest	GLXMA 10-29-12 200 Seed wt gram Harvest	GLXMA 6-7-12 V1 Percent 3 WAP	GLXMA 6-28-12 R1 Percent 6 WAP	GLXMA 7-9-12 R2 Percent 7 WAP	GLXMA 7-9-12 R Stage 7 WAP
21	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	88.9 a	143.3 a	126.7 a	40.1 a	10 a	20 ef	100 a	2.0 a
	BOUNDARY	6.5	EC	3.4	lb ai/a	4.2	pt/a	0-7DBP	A								
22	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	80.9 a	143.9 a	124.0 a	40.5 a	20 a	28 def	100 a	2.0 a
	PREFIX	5.29	EC	3.3	lb ai/a	5.0	pt/a	0-7DBP	A								
23	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	88.9 a	131.3 a	117.4 a	40.8 a	35 a	10 f	93 a	1.9 a
	SHARPEN	2.85	SC	0.0445	lb ai/a	2.0	fl oz/a	0-7DBP	A								
24	VALOR SX	51	WG	0.16	lb ai/a	5.0	oz/a	0-7DBP	A	61.0 a	125.3 a	116.1 a	40.5 a	28 a	38 a-f	98 a	2.0 a
	KIH-485	85	WG	0.213	lb ai/a	4	oz/a	0-7DBP	A								
25	NONTREATED									123.4 a	146.6 a	134.0 a	40.2 a	65 a	65 a	95 a	1.9 a
LSD (P=.05)										87.55	26.45	28.66	1.49	41.2	28.8	11.8	0.25
Standard Deviation										61.91	18.70	20.27	1.05	29.1	20.3	8.3	0.18
CV										70.99	13.35	16.58	2.58	77.83	50.49	8.55	8.96
Replicate F										2.636	2.471	3.059	0.371	4.697	6.533	5.988	6.409
Replicate Prob(F)										0.0562	0.0686	0.0336	0.7744	0.0047	0.0006	0.0011	0.0007
Treatment F										0.887	0.996	0.963	1.456	1.346	1.989	1.051	0.842
Treatment Prob(F)										0.6167	0.4826	0.5219	0.1132	0.1678	0.0135	0.4185	0.6735

Southern Illinois University

Residual Herbicide Tank-Mixtures: Weed Free Study - SIU.

Trial ID: 12-9B-N270
Location: Belleville Res Center
Investigator: Bryan Young

Trial Comments

1. Protocol: ISA - Res_Hb_Tm_WF-SIU.
2. Trial including border rows, is to be maintained weed-free.
   Ratings: CI (overall, stunting, chlorosis, necrosis) at 3, 6, and 9 WAP.
   Determine growth stage of 10 plants/plot at each evaluation. Photos at all evaluation timings.
3. Determine soybean population (count plants in 1 meter of row at 2 locations in each plot)
   at 3 WAP and at harvest.
4. Yield is required. Measure weight of 200 seeds/plot.
   Complete harvest index evaluation may be prudent, but not confirmed at this time.
5. Boundary and Prefix rates may be adjusted to match local practices.
6. WAP = Weeks after planting. 000/A = Thousands per acre.
   V1 Percent = Percentage of 10 sampled plants that had reached soybean vegetative stage 1.
   R1 Percent = Percentage of 10 sampled plants that had reached soybean reproductive stage 1.
   R2 Percent = Percentage of 10 sampled plants that had reached soybean reproductive stage 2.
   R Stage = Soybean reproductive stage.
7. Soybean emergence was delayed and non-uniform due to dry soil conditions, however
   the variability in development became much less by 7 WAP.
8. Harvested 10-29-12, (2) 30 inch rows by 22 ft.

Corn Hybrids, Insecticides and Plant Growth Regulators

Southern Illinois University

Interaction of In-Furrow Counter with Early Preplant Applied SU Herbicides.

Trial ID: 12-WF-SE-N120
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-2-12

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate crop tolerance from early preplant applications of Basis at 45 or 30 DAP to corn planted with Counter 20G in-furrow.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: P1395HR **Description:** non-RIB
BBCH Scale: BCOR **Planting Date:** 5-17-12
Planting Method: SEEDED Seeded **Rate, Unit:** 28000 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** NA
Common Name: crop tolerance only

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 45 FT
Plot Area, Unit: 450 FT2 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	_____	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 150 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Field Prep./Maintenance:

Soil Description

% Sand: 5.67 **% OM:** 1.69 **Texture:** SIL SILT LOAM
% Silt: 82.40 **pH:** 6.1 **Soil Name:** WINFIELD
% Clay: 11.97 **CEC:** 10.4

Additional Measured Elements

Element	Quantity	Unit
P1	92	LB/A
K	390	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Southern Illinois University

Interaction of In-Furrow Counter with Early Preplant Applied SU Herbicides.

Trial ID: 12-WF-SE-N120
Location: Belleville Res. Center
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-24-12					7	DAY	42.6	74.3	F
2.	4-29-12	3.06	IN	RAIN	rain					
3.	4-30-12	0.66	IN	RAIN	rain					
4.	5-1-12	0.13	IN	RAIN	rain					
5.	5-1-12					7	DAY	33.5	76	F
6.	5-4-12	0.25	IN	RAIN	rain					
7.	5-7-12	0.29	IN	RAIN	rain					
8.	5-8-12					7	DAY	47.5	87.8	F
9.	5-15-12					7	DAY	37.7	81.3	F
10.	5-21-12	0.18	IN	RAIN	rain					
11.	5-22-12					7	DAY	47.6	82.3	F
12.	5-29-12					7	DAY	48.1	90	F
13.	5-30-12	0.07	IN	RAIN	rain					
14.	5-31-12	0.21	IN	RAIN	rain					
15.	6-5-12					7	DAY	50.2	90.1	F
16.	6-11-12	0.75	IN	RAIN	rain					
17.	6-12-12					7	DAY	52.4	93.6	F
18.	6-17-12	0.36	IN	RAIN	rain					
19.	6-19-12					7	DAY	56.3	94	F
20.	6-26-12					7	DAY	51.8	105.4	F
21.	7-3-12					7	DAY	68.9	104.7	F
22.	7-8-12	0.28	IN	RAIN	rain					
23.	7-10-12					7	DAY	63.4	95	F
24.	7-17-12					7	DAY	61	102.2	F
25.	7-24-12					7	DAY	61	103	F
26.	7-29-12	0.15	IN	RAIN	rain					
27.	7-31-12					7	DAY	60.2	99.1	F
28.	8-5-12	0.18	IN	RAIN	rain					
29.	8-7-12					7	DAY	50.2	99.8	F
30.	8-13-12	0.88	IN	RAIN	rain					
31.	8-14-12					7	DAY	51	95.6	F
32.	8-17-12	1.19	IN	RAIN	rain					
33.	8-21-12					7	DAY	54.7	94.2	F
34.	8-26-12	0.04	IN	RAIN	rain					
35.	8-27-12	1.66	IN	RAIN	rain					
36.	8-31-12	0.11	IN	RAIN	rain					

Application Description

	A	B	C	D
Application Date:	4-2-12	4-17-12	5-10-12	5-17-12
Time of Day:	10:00	10:00	8:00	16:00
Application Method:	Spray	Spray	Spray	Planter
Application Timing:	45EPP	30EPP	7EPP	IN-FURROW
Application Placement:	BROFOL	BROFOL	BROFOL	INFURR
Applied By:	RFK	RFK	RFK	RFK
Air Temperature, Unit:	84 F	64 F	61 F	80 F
% Relative Humidity:	55	54	70	28
Wind Velocity, Unit:	0 MPH	0 MPH	0 MPH	5 MPH
Wind Direction:				E
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	47 F	54 F	66 F	61 F
Soil Moisture:	NORMAL	ABONOR	ABONOR	NORMAL
% Cloud Cover:	0	0	0	0
Next Rain Occurred On:	4-4-12	4-20-12	5-20-12	5-20-12

Southern Illinois University

Interaction of In-Furrow Counter with Early Preplant Applied SU Herbicides.

Trial ID: 12-WF-SE-N120
Location: Belleville Res. Center
Investigator: Bryan Young

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR
Stage Scale Used:	DESC	DESC	DESC	DESC
Stage Majority, Percent:	NA	NA	NA	NA

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	NA W DESC	NA W DESC	NA W DESC	NA W DESC
Stage Majority, Percent:	NA	NA	NA	NA

Application Equipment

	A	B	C	D
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	Planter
Equipment Type:	BACSPR	BACSPR	BACSPR	METDEV
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI	
Nozzle Type:	Flat fan	Flat fan	Flat fan	NA
Nozzle Size:	XR 8002	XR 8002	XR 8002	NA
Boom Length, Unit:	10 FT	10 FT	10 FT	
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	

Interaction of In-Furrow Counter with Early Preplant Applied SU Herbicides.

Trial ID: 12-WF-SE-N120
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 5-31-12 Injury Percent 14 DAP	ZEAMD 6-14-12 Injury Percent 28 DAP	ZEAMD 7-12-12 Injury Percent 56 DAP
1	BASIS	75 WG		0.0234	lb ai/a	0.5	oz/a	45EPP	A	0.0 a	0.0 a	0.0 a
2	BASIS	75 WG		0.0234	lb ai/a	0.5	oz/a	45EPP	A	0.0 a	0.0 a	0.0 a
	COUNTER 20 G	20 GR		1.2	oz ai/1000 row-ft	6	oz wt/1000 row-ft	IN-FURROW	D			
3	BASIS	75 WG		0.047	lb ai/a	1	oz/a	45EPP	A	0.0 a	0.0 a	0.0 a
4	BASIS	75 WG		0.047	lb ai/a	1	oz/a	45EPP	A	0.0 a	0.0 a	0.0 a
	COUNTER 20 G	20 GR		1.2	oz ai/1000 row-ft	6	oz wt/1000 row-ft	IN-FURROW	D			
5	BASIS	75 WG		0.0234	lb ai/a	0.5	oz/a	30EPP	B	0.0 a	0.0 a	0.0 a
6	BASIS	75 WG		0.0234	lb ai/a	0.5	oz/a	30EPP	B	0.0 a	0.0 a	0.0 a
	COUNTER 20 G	20 GR		1.2	oz ai/1000 row-ft	6	oz wt/1000 row-ft	IN-FURROW	D			
7	BASIS	75 WG		0.047	lb ai/a	1	oz/a	30EPP	B	0.0 a	0.0 a	0.0 a
8	BASIS	75 WG		0.047	lb ai/a	1	oz/a	30EPP	B	0.0 a	0.0 a	0.0 a
	COUNTER 20 G	20 GR		1.2	oz ai/1000 row-ft	6	oz wt/1000 row-ft	IN-FURROW	D			
9	BASIS	75 WG		0.047	lb ai/a	1	oz/a	7EPP	C	0.0 a	0.0 a	0.0 a
10	BASIS	75 WG		0.047	lb ai/a	1	oz/a	7EPP	C	0.0 a	0.0 a	0.0 a
	COUNTER 20 G	20 GR		1.2	oz ai/1000 row-ft	6	oz wt/1000 row-ft	IN-FURROW	D			
11	NONTREATED									0.0 a	0.0 a	0.0 a
12	COUNTER 20 G	20 GR		1.2	oz ai/1000 row-ft	6	oz wt/1000 row-ft	IN-FURROW	D	0.0 a	0.0 a	0.0 a
LSD (P=.05)										0.00	0.00	0.00
Standard Deviation										0.00	0.00	0.00
CV										0.0	0.0	0.0
Replicate F										0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Interaction of In-Furrow Counter with Early Preplant Applied SU Herbicides.

Trial ID: 12-WF-SE-N120
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: DuPont (USA-12-114).
2. Ratings: CI at 14, 28, and 56 DAP.
   Record soil texture class and % sand silt clay, pH, OM, and CEC.
   Report daily rainfall starting 2 weeks before planting until 4 weeks after planting.
3. Weedfree - start clean, use glyphosate prior to planting if needed.
   Keep weedfree using non-SU herbicides POST.
4. Use Counter 20% from AMVAC, not 20 CR, not 15 G.
5. Rainfall in inches for the 2 weeks before and 4 weeks after planting on 5-17-12 was;
0.25 on May 4,
0.29 on May 7,
0.18 on May 21,
0.28 on May 31,
0.75 on June 11,
0.36 on June 17.
6. Not harvested.

Corn Hybrid Sensitivity to ALS Herbicides.

Trial ID: 12-ARC-20-M220
Location: Agronomy Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-12-12

Trial Location

City: Carbondale
State/Prov.: IL
Postal Code: 62901
Country: USA

Objectives:
To determine hybrid sensitivity of ALS herbicides preemergence and early V1 stages in a field setting and to determine effect on yield.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: See treatment list
BBCH Scale: BCOR **Planting Date:** 4-12-12
Planting Method: SEEDED **Rate, Unit:** 28000 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Code: NA

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 198 LB/A, P2O5 46 LB/A, K2O 120 LB/A

Soil Description

% OM: 1.8 **Texture:** SIL SILT LOAM
pH: 6.3 **Soil Name:** STOY
CEC: 10.5

Additional Measured Elements

Element	Quantity	Unit
P1	65	LB/A
K	313	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Carbondale IL **Distance, Unit:** 0.5 MI

Corn Hybrid Sensitivity to ALS Herbicides.

Trial ID: 12-ARC-20-M220
Location: Agronomy Res. Center
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-3-12					7	DAY	34.6	78.3	F
2.	4-4-12	0.88	IN	RAIN	rain					
3.	4-10-12					7	DAY	30.1	79.2	F
4.	4-15-12	0.43	IN	RAIN	rain					
5.	4-16-12	0.39	IN	RAIN	rain					
6.	4-17-12					7	DAY	36.7	75.6	F
7.	4-20-12	0.25	IN	RAIN	rain					
8.	4-22-12	0.09	IN	RAIN	rain					
9.	4-24-12					7	DAY	43.7	80.9	F
10.	4-27-12	0.08	IN	RAIN	rain					
11.	4-30-12	0.05	IN	RAIN	rain					
12.	5-1-12					7	DAY	59.1	91.3	F
13.	5-4-12	0.02	IN	RAIN	rain					
14.	5-7-12	0.08	IN	RAIN	rain					
15.	5-8-12					7	DAY	43.3	79	F
16.	5-15-12					7	DAY	44.9	89.1	F
17.	5-20-12	0.4	IN	RAIN	rain					
18.	5-22-12					7	DAY	45.5	92.8	F
19.	5-29-12					7	DAY	46.3	89.8	F
20.	5-29-12	0.02	IN	RAIN	rain					
21.	5-30-12	0.02	IN	RAIN	rain					
22.	5-31-12	0.16	IN	RAIN	rain					
23.	6-4-12	0.16	IN	RAIN	rain					
24.	6-5-12					7	DAY	48.5	88.8	F
25.	6-11-12	0.62	IN	RAIN	rain					
26.	6-12-12					7	DAY	49.8	91.1	F
27.	6-17-12	0.06	IN	RAIN	rain					
28.	6-19-12					7	DAY	55.4	96.4	F
29.	6-26-12					7	DAY	51.1	105.4	F
30.	7-3-12					7	DAY	71.1	105	F
31.	7-8-12	1.15	IN	RAIN	rain					
32.	7-10-12					7	DAY	65.9	93.9	F
33.	7-14-12	0.11	IN	RAIN	rain					
34.	7-16-12	0.02	IN	RAIN	rain					
35.	7-17-12					7	DAY	60	102.3	F
36.	7-17-12	0.02	IN	RAIN	rain					
37.	7-23-12	0.02	IN	RAIN	rain					
38.	7-24-12					7	DAY	64.1	102.1	F
39.	7-26-12	0.53	IN	RAIN	rain					
40.	7-27-12	0.02	IN	RAIN	rain					
41.	7-29-12	0.27	IN	RAIN	rain					
42.	7-31-12					7	DAY	62.7	97.9	F
43.	8-2-12	0.02	IN	RAIN	rain					
44.	8-3-12	0.02	IN	RAIN	rain					
45.	8-4-12	2.83	IN	RAIN	rain					
46.	8-5-12	2.09	IN	RAIN	rain					
47.	8-7-12					7	DAY	54.1	97.2	F
48.	8-13-12	0.38	IN	RAIN	rain					
49.	8-14-12					7	DAY	51.2	92.5	F
50.	8-16-12	0.66	IN	RAIN	rain					
51.	8-21-12					7	DAY	54.6	94.1	F
52.	8-28-12					7	DAY	54.8	96.2	F

Southern Illinois University

Corn Hybrid Sensitivity to ALS Herbicides.

Trial ID: 12-ARC-20-M220
Location: Agronomy Res. Center
Investigator: Bryan Young

Application Description

	A	B
Application Date:	4-12-12	4-26-12
Time of Day:	16:00	8:00
Application Method:	Spray	Spray
Application Timing:	PRE	V1
Application Placement:	BROSOI	BROFOL
Applied By:	JRK	RJW
Air Temperature, Unit:	70 F	72 F
% Relative Humidity:	26	81
Wind Velocity, Unit:	3 MPH	2 MPH
Wind Direction:	S	N
Dew Presence (Y/N):	N no	Y yes
Soil Temperature, Unit:	64 F	64 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	5	5
Next Rain Occurred On:	4-13-12	4-27-12

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	ZEAMD BCOR
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	< V1
Height, Unit:	NA IN	1.5 IN
Height Minimum, Maximum:		1 1.5

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	NA DESC	NA DESC
Stage Majority, Percent:	NA	NA

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	10 FT	10 FT
Spray Volume, Unit:	15 GPA	15 GPA

Corn Hybrid Sensitivity to ALS Herbicides.

Trial ID: 12-ARC-20-M220
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 9-24-12 Moisture Percent	ZEAMD 9-24-12 Test wt. lb/bu	ZEAMD 9-24-12 Yield bu/A
	Pest Code											
	Crop Code											
	Rating Date											
	Rating Type											
	Rating Unit											
	Rating Timing											
	Trt-Eval Interval											
1	DKC 61-69 VT3									13.1 a	56.5 a	50 a
	DEGREE XTRA	4.04	CS	2.53	lb ai/a	2.5	qt/a	PRE	A			
2	DKC 64-69 GENVT3P									15.0 a	59.4 a	46 a
	DEGREE XTRA	4.04	CS	2.53	lb ai/a	2.5	qt/a	PRE	A			
3	DKC 61-69 VT3									13.2 a	55.1 a	50 a
	DEGREE XTRA	4.04	CS	2.53	lb ai/a	2.5	qt/a	V1	B			
4	DKC 64-69 GENVT3P									14.2 a	57.1 a	49 a
	DEGREE XTRA	4.04	CS	2.53	lb ai/a	2.5	qt/a	V1	B			
5	DKC 61-69 VT3									13.4 a	57.1 a	43 a
	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A			
6	DKC 64-69 GENVT3P									14.9 a	58.9 a	38 a
	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A			
7	DKC 61-69 VT3									13.3 a	55.8 a	41 a
	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	V1	B			
8	DKC 64-69 GENVT3P									14.2 a	57.3 a	42 a
	CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	V1	B			
9	DKC 61-69 VT3									12.3 a	52.6 a	50 a
	RESOLVE	25	WG	0.016	lb ai/a	1.02	oz/a	PRE	A			
10	DKC 64-69 GENVT3P									14.1 a	53.9 a	40 a
	RESOLVE	25	WG	0.016	lb ai/a	1.02	oz/a	PRE	A			
11	DKC 61-69 VT3									13.0 a	54.7 a	49 a
	RESOLVE	25	WG	0.016	lb ai/a	1.02	oz/a	V1	B			
12	DKC 64-69 GENVT3P									14.1 a	57.8 a	46 a
	RESOLVE	25	WG	0.016	lb ai/a	1.02	oz/a	V1	B			
13	DKC 61-69 VT3									12.9 a	54.1 a	50 a
	TRIPLEFLEX	4.25	EC	0.93	lb ai/a	1.75	pt/a	PRE	A			
14	DKC 64-69 GENVT3P									14.2 a	56.4 a	38 a
	TRIPLEFLEX	4.25	EC	0.93	lb ai/a	1.75	pt/a	PRE	A			
15	DKC 61-69 VT3									13.3 a	57.4 a	49 a
	TRIPLEFLEX	4.25	EC	0.93	lb ai/a	1.75	pt/a	V1	B			
16	DKC 64-69 GENVT3P									14.7 a	60.8 a	43 a
	TRIPLEFLEX	4.25	EC	0.93	lb ai/a	1.75	pt/a	V1	B			
17	DKC 61-69 VT3									14.0 a	59.5 a	44 a
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	PRE	A			
	TRIPLEFLEX	4.25	EC	0.93	lb ai/a	1.75	pt/a	PRE	A			
18	DKC 64-69 GENVT3P									14.8 a	59.2 a	47 a
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	PRE	A			
	TRIPLEFLEX	4.25	EC	0.93	lb ai/a	1.75	pt/a	PRE	A			

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Corn Hybrid Sensitivity to ALS Herbicides.

Trial ID: 12-ARC-20-M220
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 9-24-12 Moisture Percent	ZEAMD 9-24-12 Test wt. lb/bu	ZEAMD 9-24-12 Yield bu/A
	Pest Code											
	Crop Code											
	Rating Date											
	Rating Type											
	Rating Unit											
	Rating Timing											
	Trt-Eval Interval											
19	DKC 61-69 VT3									13.4 a	55.3 a	51 a
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	V1	B			
	TRIPLEFLEX	4.25	EC	0.93	lb ai/a	1.75	pt/a	V1	B			
20	DKC 64-69 GENVT3P									13.3 a	50.9 a	45 a
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	V1	B			
	TRIPLEFLEX	4.25	EC	0.93	lb ai/a	1.75	pt/a	V1	B			
	LSD (P=.05)									1.61	9.23	17.2
	Standard Deviation									1.14	6.53	12.2
	CV									8.26	11.56	26.68
	Replicate F									1.758	0.156	0.966
	Replicate Prob(F)									0.1654	0.9254	0.4150
	Treatment F									1.761	0.588	0.483
	Treatment Prob(F)									0.0519	0.8997	0.9592

Corn Hybrid Sensitivity to ALS Herbicides.

Trial ID: 12-ARC-20-M220
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 4-19-12 Injury Percent See comment 7 DA-A	ZEAMD 4-26-12 Injury Percent 14 DA-A	ZEAMD 5-3-12 Injury Percent 7 DA-B	ZEAMD 5-3-12 Injury Percent 21 DA-A	ZEAMD 5-17-12 Injury Percent 21 DA-B	ZEAMD 5-24-12 Injury Percent 42 DA-A	ZEAMD 6-7-12 Injury Percent 42 DA-B
1	DKC 61-69 VT3 DEGREE XTRA	4.04	CS	2.53	lb ai/a	2.5	qt/a	PRE	A		0.0 a		0.0 a		0.0 a	
2	DKC 64-69 GENVT3P DEGREE XTRA	4.04	CS	2.53	lb ai/a	2.5	qt/a	PRE	A		0.0 a		0.0 a		0.0 a	
3	DKC 61-69 VT3 DEGREE XTRA	4.04	CS	2.53	lb ai/a	2.5	qt/a	V1	B			0.0 a		0.0 a		0.0 a
4	DKC 64-69 GENVT3P DEGREE XTRA	4.04	CS	2.53	lb ai/a	2.5	qt/a	V1	B			0.0 a		0.0 a		0.0 a
5	DKC 61-69 VT3 CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A		0.0 a		0.0 a		0.0 a	
6	DKC 64-69 GENVT3P CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	PRE	A		0.0 a		0.0 a		0.0 a	
7	DKC 61-69 VT3 CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	V1	B			0.0 a		0.0 a		0.0 a
8	DKC 64-69 GENVT3P CORVUS	2.62	SC	0.115	lb ai/a	5.6	fl oz/a	V1	B			0.0 a		0.0 a		0.0 a
9	DKC 61-69 VT3 RESOLVE	25	WG	0.016	lb ai/a	1.02	oz/a	PRE	A		0.0 a		0.0 a		0.0 a	
10	DKC 64-69 GENVT3P RESOLVE	25	WG	0.016	lb ai/a	1.02	oz/a	PRE	A		0.0 a		0.0 a		0.0 a	
11	DKC 61-69 VT3 RESOLVE	25	WG	0.016	lb ai/a	1.02	oz/a	V1	B			0.0 a		0.0 a		0.0 a
12	DKC 64-69 GENVT3P RESOLVE	25	WG	0.016	lb ai/a	1.02	oz/a	V1	B			0.0 a		0.0 a		0.0 a
13	DKC 61-69 VT3 TRIPLEFLEX	4.25	EC	0.93	lb ai/a	1.75	pt/a	PRE	A		0.0 a		0.0 a		0.0 a	
14	DKC 64-69 GENVT3P TRIPLEFLEX	4.25	EC	0.93	lb ai/a	1.75	pt/a	PRE	A		0.0 a		0.0 a		0.0 a	
15	DKC 61-69 VT3 TRIPLEFLEX	4.25	EC	0.93	lb ai/a	1.75	pt/a	V1	B			0.0 a		0.0 a		0.0 a
16	DKC 64-69 GENVT3P TRIPLEFLEX	4.25	EC	0.93	lb ai/a	1.75	pt/a	V1	B			0.0 a		0.0 a		0.0 a
17	DKC 61-69 VT3 CALLISTO TRIPLEFLEX	4 4.25	SC EC	0.094 0.93	lb ai/a lb ai/a	3 1.75	fl oz/a pt/a	PRE PRE	A A		0.0 a		0.0 a		0.0 a	
18	DKC 64-69 GENVT3P CALLISTO TRIPLEFLEX	4 4.25	SC EC	0.094 0.93	lb ai/a lb ai/a	3 1.75	fl oz/a pt/a	PRE PRE	A A		0.0 a		0.0 a		0.0 a	

Corn Hybrid Sensitivity to ALS Herbicides.

Trial ID: 12-ARC-20-M220
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 4-19-12 Injury Percent See comment 7 DA-A	ZEAMD 4-26-12 Injury Percent 14 DA-A	ZEAMD 5-3-12 Injury Percent 7 DA-B	ZEAMD 5-3-12 Injury Percent 21 DA-A	ZEAMD 5-17-12 Injury Percent 21 DA-B	ZEAMD 5-24-12 Injury Percent 42 DA-A	ZEAMD 6-7-12 Injury Percent 42 DA-B
19	DKC 61-69 VT3											0.0 a		0.0 a		0.0 a
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	V1	B							
	TRIPLEFLEX	4.25	EC	0.93	lb ai/a	1.75	pt/a	V1	B							
20	DKC 64-69 GENVT3P											0.0 a		0.0 a		0.0 a
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	V1	B							
	TRIPLEFLEX	4.25	EC	0.93	lb ai/a	1.75	pt/a	V1	B							
LSD (P=.05)										.	0.00	0.00	0.00	0.00	0.00	0.00
Standard Deviation										.	0.00	0.00	0.00	0.00	0.00	0.00
CV										.	0.0	0.0	0.0	0.0	0.0	0.0
Replicate F											0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)											1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F											0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)											1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Southern Illinois University

Corn Hybrid Sensitivity to ALS Herbicides.

Trial ID: 12-ARC-20-M220
Location: Agronomy Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Monsanto (52-01).
2. Ratings: CI (describe injury and rate separately if needed chlorosis, necrosis, growth reduction) at 7, 21, and 42 DAT.
   Take photos of injury symptoms at any evaluation where they occur.
   Inspect/Evaluate ear development.
3. V1 timing is targeted for when the first leaf starts to be visible and emerge from the coleoptile.
4. Take photos at the B application to document corn growth stage.
5. Apply Roundup PowerMax as needed to maintain weed-free.
6. Yield, test weight.
7. Rainfall following the PRE application was 0.16 inch 1 day later, 0.43 inch 3 days later, 0.39 inch 4 days later, 0.25 inch 8 days later and 0.09 inch 10 days later.
   Rainfall following the V1 application was 0.08 inch 1 day later, 0.05 inch 4 days later, 0.01 inch 5 days later, 0.02 inch 8 days later, 0.01 inch 10 days later and 0.08 inch 11 days later.
8. Ratings at 7 DA-A were not possible as the corn had not yet emerged.
9. Harvested 9-24-12, (2) 30 inch rows by 24 ft.

Southern Illinois University

Corn Hybrid Response to POST Herbicide Applications.

Trial ID: 12-ARC-20-S385
Location: Agronomy Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-12-12

Trial Location

City: Carbondale
State/Prov.: IL
Postal Code: 62901
Country: USA

Objectives:
To evaluate different genetic response to postemergence herbicide applications in corn.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: See treatment list
BBCH Scale: BCOR **Planting Date:** 4-12-12
Planting Method: SEEDED Seeded **Rate, Unit:** 28000 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Code: NA

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 22 FT
Plot Area, Unit: 220 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 198 LB/A, P2O5 46 LB/A, K2O 120 LB/A

Soil Description

% OM: 1.8 **Texture:** SIL SILT LOAM
pH: 6.3 **Soil Name:** STOY
CEC: 10.5

Additional Measured Elements

Element	Quantity	Unit
P1	65	LB/A
K	313	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Carbondale IL **Distance, Unit:** 0.5 MI

Corn Hybrid Response to POST Herbicide Applications.

Trial ID: 12-ARC-20-S385
Location: Agronomy Res. Center
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-3-12					7	DAY	34.6	78.3	F
2.	4-4-12	0.88	IN	RAIN	rain					
3.	4-10-12					7	DAY	30.1	79.2	F
4.	4-15-12	0.43	IN	RAIN	rain					
5.	4-16-12	0.39	IN	RAIN	rain					
6.	4-17-12					7	DAY	36.7	75.6	F
7.	4-20-12	0.25	IN	RAIN	rain					
8.	4-22-12	0.09	IN	RAIN	rain					
9.	4-24-12					7	DAY	43.7	80.9	F
10.	4-27-12	0.08	IN	RAIN	rain					
11.	4-30-12	0.05	IN	RAIN	rain					
12.	5-1-12					7	DAY	59.1	91.3	F
13.	5-4-12	0.02	IN	RAIN	rain					
14.	5-7-12	0.08	IN	RAIN	rain					
15.	5-8-12					7	DAY	43.3	79	F
16.	5-15-12					7	DAY	44.9	89.1	F
17.	5-20-12	0.4	IN	RAIN	rain					
18.	5-22-12					7	DAY	45.5	92.8	F
19.	5-29-12					7	DAY	46.3	89.8	F
20.	5-29-12	0.02	IN	RAIN	rain					
21.	5-30-12	0.02	IN	RAIN	rain					
22.	5-31-12	0.16	IN	RAIN	rain					
23.	6-4-12	0.16	IN	RAIN	rain					
24.	6-5-12					7	DAY	48.5	88.8	F
25.	6-11-12	0.62	IN	RAIN	rain					
26.	6-12-12					7	DAY	49.8	91.1	F
27.	6-17-12	0.06	IN	RAIN	rain					
28.	6-19-12					7	DAY	55.4	96.4	F
29.	6-26-12					7	DAY	51.1	105.4	F
30.	7-3-12					7	DAY	71.1	105	F
31.	7-8-12	1.15	IN	RAIN	rain					
32.	7-10-12					7	DAY	65.9	93.9	F
33.	7-14-12	0.11	IN	RAIN	rain					
34.	7-16-12	0.02	IN	RAIN	rain					
35.	7-17-12					7	DAY	60	102.3	F
36.	7-17-12	0.02	IN	RAIN	rain					
37.	7-23-12	0.02	IN	RAIN	rain					
38.	7-24-12					7	DAY	64.1	102.1	F
39.	7-26-12	0.53	IN	RAIN	rain					
40.	7-27-12	0.02	IN	RAIN	rain					
41.	7-29-12	0.27	IN	RAIN	rain					
42.	7-31-12					7	DAY	62.7	97.9	F
43.	8-2-12	0.02	IN	RAIN	rain					
44.	8-3-12	0.02	IN	RAIN	rain					
45.	8-4-12	2.83	IN	RAIN	rain					
46.	8-5-12	2.09	IN	RAIN	rain					
47.	8-7-12					7	DAY	54.1	97.2	F
48.	8-13-12	0.38	IN	RAIN	rain					
49.	8-14-12					7	DAY	51.2	92.5	F
50.	8-16-12	0.66	IN	RAIN	rain					
51.	8-21-12					7	DAY	54.6	94.1	F
52.	8-28-12					7	DAY	54.8	96.2	F

Corn Hybrid Response to POST Herbicide Applications.

Trial ID: 12-ARC-20-S385
Location: Agronomy Res. Center
Investigator: Bryan Young

Application Description

	A	B	C
Application Date:	5-2-12	5-15-12	5-25-12
Time of Day:	17:30	14:30	13:30
Application Method:	Spray	Spray	Spray
Application Timing:	V2	11"CN	20"CN
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	JRK	LAH	JRK
Air Temperature, Unit:	89 F	84 F	90 F
% Relative Humidity:	50	29	63
Wind Velocity, Unit:	4 MPH	2 MPH	4 MPH
Wind Direction:	S	N	S
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	85 F	84 F	87 F
Soil Moisture:	NORMAL	BELNOR	BELNOR
% Cloud Cover:	5	10	50
Next Rain Occurred On:	5-4-12	5-20-12	5-29-12

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	V2	V5	V8
Stage Minimum, Percent:	V2	V5	V7
Stage Maximum, Percent:	V2	V5	V8
Height, Unit:	6 IN	11 IN	20 IN
Height Minimum, Maximum:	4 6	8 11	18 20

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	NA DESC	NA DESC	NA DESC
Stage Majority, Percent:	NA	NA	NA

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	10 FT	10 FT	10 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Corn Hybrid Response to POST Herbicide Applications.

Trial ID: 12-ARC-20-S385
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 9-24-12 Moisture Percent	ZEAMD 9-24-12 Test wt. lb/bu	ZEAMD 9-24-12 Yield bu/A	ZEAMD GRORED Percent 7 DAT	ZEAMD GRORED Percent 21 DAT	ZEAMD GRORED Percent 42 DAT
1	DKC 61-69 VT3									12.8 g-q	53.4 a	46 a	0.0 d	0.0 c	0.0 b
	ROUNDUP WEATHERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2	A						
2	DKC 61-69 VT3									12.6 i-q	53.4 a	32 a	0.0 d	0.0 c	0.0 b
	ROUNDUP WEATHERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	20"CN	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	20"CN	C						
3	DKC 61-69 VT3									12.9 e-p	54.4 a	38 a	0.0 d	0.0 c	0.0 b
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	V2	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V2	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	A						
4	DKC 61-69 VT3									13.0 d-o	53.9 a	40 a	0.0 d	0.0 c	0.0 b
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	20"CN	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	20"CN	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	20"CN	C						
5	DKC 61-69 VT3									11.4 pqr	47.5 a	28 a	0.0 d	0.0 c	0.0 b
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	V2	A						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V2	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2	A						
6	DKC 61-69 VT3									13.6 a-l	56.6 a	41 a	0.0 d	0.0 c	0.0 b
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	20"CN	C						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	20"CN	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	20"CN	C						
7	DKC 61-69 VT3									13.5 a-m	59.1 a	44 a	0.0 d	0.0 c	0.0 b
	HALEX GT	4.38	CS	1.98	lb ai/a	3.6	pt/a	V2	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2	A						
8	DKC 61-69 VT3									13.6 a-m	55.3 a	35 a	0.0 d	0.0 c	0.0 b
	HALEX GT	4.38	CS	1.98	lb ai/a	3.6	pt/a	20"CN	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	20"CN	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	20"CN	C						
9	DKC 61-69 VT3									12.9 f-p	53.9 a	32 a	0.0 d	0.0 c	0.0 b
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V2	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V2	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	A						
10	DKC 61-69 VT3									13.6 a-m	57.5 a	54 a	2.5 bc	1.3 b	0.0 b
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	20"CN	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	20"CN	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	20"CN	C						
11	DKC 61-69 VT3									13.2 c-n	58.2 a	47 a	0.0 d	0.0 c	0.0 b
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	V2	A						
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	V2	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V2	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	A						
12	DKC 61-69 VT3									12.4 j-r	52.9 a	31 a	0.0 d	0.0 c	0.0 b
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	20"CN	C						
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	20"CN	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	20"CN	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	20"CN	C						

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Corn Hybrid Response to POST Herbicide Applications.

Trial ID: 12-ARC-20-S385
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 9-24-12 Moisture Percent	ZEAMD 9-24-12 Test wt. lb/bu	ZEAMD 9-24-12 Yield bu/A	ZEAMD GRORED Percent 7 DAT	ZEAMD GRORED Percent 21 DAT	ZEAMD GRORED Percent 42 DAT
13	DKC 61-69 VT3									13.0 d-o	56.3 a	65 a	0.0 d	0.0 c	0.0 b
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	V2	A						
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	V2	A						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V2	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2	A						
14	DKC 61-69 VT3									13.7 a-j	56.2 a	33 a	0.0 d	0.0 c	0.0 b
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	20"CN	C						
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	20"CN	C						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	20"CN	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	20"CN	C						
15	DKC 61-69 VT3									14.0 a-i	59.9 a	41 a	0.0 d	0.0 c	0.0 b
	TRIPLEFLEX	4.25	EC	0.80	lb ai/a	24	fl oz/a	V2	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2	A						
16	DKC 61-69 VT3									13.1 c-o	55.5 a	36 a	0.0 d	0.0 c	0.0 b
	TRIPLEFLEX	4.25	EC	0.80	lb ai/a	24	fl oz/a	11"CN	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	11"CN	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	11"CN	B						
17	DKC 61-69 VT3									13.3 b-n	55.4 a	27 a	0.0 d	0.0 c	0.0 b
	RESOLVE SG	25	SG	0.0188	lb ai/a	1.2	oz/a	V2	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2	A						
	N-PAK AMS	100	SL	3.9	% v/v	3.9	% v/v	V2	A						
18	DKC 61-69 VT3									12.5 j-r	52.4 a	50 a	1.3 cd	0.0 c	0.0 b
	RESOLVE SG	25	SG	0.0188	lb ai/a	1.2	oz/a	20"CN	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	20"CN	C						
	N-PAK AMS	100	SL	3.9	% v/v	3.9	% v/v	20"CN	C						
19	DKC 64-69 GENVT3P									13.3 b-n	54.0 a	36 a	0.0 d	0.0 c	0.0 b
	ROUNDUP WEATHERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2	A						
20	DKC 64-69 GENVT3P									14.8 ab	60.4 a	29 a	0.0 d	0.0 c	0.0 b
	ROUNDUP WEATHERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	20"CN	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	20"CN	C						
21	DKC 64-69 GENVT3P									15.0 a	59.3 a	33 a	0.0 d	0.0 c	0.0 b
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	V2	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V2	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	A						
22	DKC 64-69 GENVT3P									12.5 j-r	46.3 a	31 a	0.0 d	0.0 c	0.0 b
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	20"CN	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	20"CN	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	20"CN	C						
23	DKC 64-69 GENVT3P									12.0 n-r	44.4 a	21 a	0.0 d	0.0 c	0.0 b
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	V2	A						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V2	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2	A						
24	DKC 64-69 GENVT3P									13.7 a-k	52.6 a	39 a	0.0 d	0.0 c	0.0 b
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	20"CN	C						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	20"CN	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	20"CN	C						

Corn Hybrid Response to POST Herbicide Applications.

Trial ID: 12-ARC-20-S385
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 9-24-12 Moisture Percent	ZEAMD 9-24-12 Test wt. lb/bu	ZEAMD 9-24-12 Yield bu/A	ZEAMD GRORED Percent 7 DAT	ZEAMD GRORED Percent 21 DAT	ZEAMD GRORED Percent 42 DAT
25	DKC 64-69 GENVT3P									14.8 ab	59.3 a	26 a	0.0 d	0.0 c	0.0 b
	HALEX GT	4.38	CS	1.98	lb ai/a	3.6	pt/a	V2	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2	A						
26	DKC 64-69 GENVT3P									13.6 a-l	52.6 a	28 a	0.0 d	0.0 c	0.0 b
	HALEX GT	4.38	CS	1.98	lb ai/a	3.6	pt/a	20"CN	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	20"CN	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	20"CN	C						
27	DKC 64-69 GENVT3P									13.1 c-o	51.1 a	29 a	0.0 d	0.0 c	0.0 b
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V2	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V2	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	A						
28	DKC 64-69 GENVT3P									13.8 a-j	54.5 a	37 a	3.8 b	1.3 b	0.0 b
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	20"CN	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	20"CN	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	20"CN	C						
29	DKC 64-69 GENVT3P									14.2 a-g	58.6 a	47 a	0.0 d	0.0 c	0.0 b
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	V2	A						
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	V2	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V2	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	A						
30	DKC 64-69 GENVT3P									14.6 abc	60.0 a	31 a	0.0 d	0.0 c	0.0 b
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	20"CN	C						
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	20"CN	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	20"CN	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	20"CN	C						
31	DKC 64-69 GENVT3P									14.4 a-e	57.0 a	56 a	0.0 d	0.0 c	0.0 b
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	V2	A						
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	V2	A						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V2	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2	A						
32	DKC 64-69 GENVT3P									14.3 a-f	54.1 a	25 a	0.0 d	0.0 c	0.0 b
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	20"CN	C						
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	20"CN	C						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	20"CN	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	20"CN	C						
33	DKC 64-69 GENVT3P									14.1 a-h	55.0 a	27 a	0.0 d	0.0 c	0.0 b
	TRIPLEFLEX	4.25	EC	0.80	lb ai/a	24	fl oz/a	V2	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2	A						
34	DKC 64-69 GENVT3P									14.2 a-g	57.1 a	36 a	0.0 d	0.0 c	0.0 b
	TRIPLEFLEX	4.25	EC	0.80	lb ai/a	24	fl oz/a	11"CN	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	11"CN	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	11"CN	B						
35	DKC 64-69 GENVT3P									14.5 a-d	60.1 a	21 a	0.0 d	0.0 c	0.0 b
	RESOLVE SG	25	SG	0.0188	lb ai/a	1.2	oz/a	V2	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2	A						
	N-PAK AMS	100	SL	3.9	% v/v	3.9	% v/v	V2	A						
36	DKC 64-69 GENVT3P									13.2 c-n	52.0 a	22 a	26.3 a	21.3 a	10.8 a
	RESOLVE SG	25	SG	0.0188	lb ai/a	1.2	oz/a	20"CN	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	20"CN	C						
	N-PAK AMS	100	SL	3.9	% v/v	3.9	% v/v	20"CN	C						

Corn Hybrid Response to POST Herbicide Applications.

Trial ID: 12-ARC-20-S385
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 9-24-12 Moisture Percent	ZEAMD 9-24-12 Test wt. lb/bu	ZEAMD 9-24-12 Yield bu/A	ZEAMD GRORED Percent 7 DAT	ZEAMD GRORED Percent 21 DAT	ZEAMD GRORED Percent 42 DAT
37	DKC 62-58 GENVT2P									11.9 n-r	56.6 a	33 a	0.0 d	0.0 c	0.0 b
	ROUNDUP WEATHERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2	A						
38	DKC 62-58 GENVT2P									11.9 n-r	55.0 a	40 a	0.0 d	0.0 c	0.0 b
	ROUNDUP WEATHERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	20"CN	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	20"CN	C						
39	DKC 62-58 GENVT2P									12.0 n-r	57.0 a	38 a	0.0 d	0.0 c	0.0 b
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	V2	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V2	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	A						
40	DKC 62-58 GENVT2P									11.6 o-r	54.3 a	36 a	0.0 d	0.0 c	0.0 b
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	20"CN	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	20"CN	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	20"CN	C						
41	DKC 62-58 GENVT2P									12.1 l-r	54.4 a	36 a	0.0 d	0.0 c	0.0 b
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	V2	A						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V2	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2	A						
42	DKC 62-58 GENVT2P									11.0 r	51.3 a	48 a	0.0 d	0.0 c	0.0 b
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	20"CN	C						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	20"CN	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	20"CN	C						
43	DKC 62-58 GENVT2P									12.3 j-r	59.6 a	32 a	0.0 d	0.0 c	0.0 b
	HALEX GT	4.38	CS	1.98	lb ai/a	3.6	pt/a	V2	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2	A						
44	DKC 62-58 GENVT2P									11.3 qr	51.2 a	45 a	0.0 d	0.0 c	0.0 b
	HALEX GT	4.38	CS	1.98	lb ai/a	3.6	pt/a	20"CN	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	20"CN	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	20"CN	C						
45	DKC 62-58 GENVT2P									12.2 k-r	57.6 a	32 a	0.0 d	0.0 c	0.0 b
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	V2	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V2	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	A						
46	DKC 62-58 GENVT2P									11.9 n-r	54.7 a	49 a	2.5 bc	1.3 b	0.0 b
	CAPRENO	3.45	SC	0.081	lb ai/a	3	fl oz/a	20"CN	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	20"CN	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	20"CN	C						
47	DKC 62-58 GENVT2P									12.2 k-r	56.9 a	53 a	0.0 d	0.0 c	0.0 b
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	V2	A						
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	V2	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	V2	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2	A						
48	DKC 62-58 GENVT2P									12.6 h-q	59.1 a	43 a	0.0 d	0.0 c	0.0 b
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	20"CN	C						
	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	20"CN	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	20"CN	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	20"CN	C						

Corn Hybrid Response to POST Herbicide Applications.

Trial ID: 12-ARC-20-S385
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 9-24-12 Moisture Percent	ZEAMD 9-24-12 Test wt. lb/bu	ZEAMD 9-24-12 Yield bu/A	ZEAMD GRORED Percent 7 DAT	ZEAMD GRORED Percent 21 DAT	ZEAMD GRORED Percent 42 DAT
49	DKC 62-58 GENVT2P									12.0 n-r	55.4 a	55 a	0.0 d	0.0 c	0.0 b
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	V2	A						
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	V2	A						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V2	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2	A						
50	DKC 62-58 GENVT2P									12.1 m-r	53.5 a	29 a	0.0 d	0.0 c	0.0 b
	STATUS	56	WG	0.0875	lb ae/a	2.5	oz/a	20"CN	C						
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	20"CN	C						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	20"CN	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	20"CN	C						
51	DKC 62-58 GENVT2P									11.7 o-r	54.3 a	38 a	0.0 d	0.0 c	0.0 b
	TRIPLEFLEX	4.25	EC	0.80	lb ai/a	24	fl oz/a	V2	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2	A						
52	DKC 62-58 GENVT2P									11.8 n-r	55.6 a	39 a	0.0 d	0.0 c	0.0 b
	TRIPLEFLEX	4.25	EC	0.80	lb ai/a	24	fl oz/a	11"CN	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	11"CN	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	11"CN	B						
53	DKC 62-58 GENVT2P									12.3 j-r	56.4 a	35 a	0.0 d	0.0 c	0.0 b
	RESOLVE SG	25	SG	0.0188	lb ai/a	1.2	oz/a	V2	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2	A						
	N-PAK AMS	100	SL	3.9	% v/v	3.9	% v/v	V2	A						
54	DKC 62-58 GENVT2P									12.3 j-r	57.2 a	41 a	0.0 d	0.0 c	0.0 b
	RESOLVE SG	25	SG	0.0188	lb ai/a	1.2	oz/a	20"CN	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	20"CN	C						
	N-PAK AMS	100	SL	3.9	% v/v	3.9	% v/v	20"CN	C						
LSD (P=.05)										1.51	8.54	23.8	1.57	0.94	0.57
Standard Deviation										1.08	6.10	17.0	1.12	0.67	0.41
CV										8.31	11.06	45.56	167.22	145.58	204.12
Replicate F										8.794	6.948	13.323	1.562	2.038	1.000
Replicate Prob(F)										0.0001	0.0002	0.0001	0.2009	0.1107	0.3945
Treatment F										3.495	1.209	1.269	41.499	73.885	51.841
Treatment Prob(F)										0.0001	0.1944	0.1319	0.0001	0.0001	0.0001

Southern Illinois University

Corn Hybrid Response to POST Herbicide Applications.

Trial ID: 12-ARC-20-S385
Location: Agronomy Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Monsanto (52-02).
2. Ratings: CI (describe injury and rate separately if needed chlorosis, necrosis, growth reduction)
   at 7, 21, and 42 DAT.
   Take photos of injury symptoms at any evaluation where they occur.
   Inspect/Evaluate ear development.
3. V2 timing is targeted for when the second collar is visible.
   11"CN timing is for Tripleflex treatments only.
   20"CN timing is 20 inch corn or V6, which ever comes first.
4. Take photos at the A + B + C applications to document corn growth stage.
5. Blanket PRE application of Degree Xtra (3 qt/A) + Atrazine (1 qt/A) was applied
   to all plots 10 ft wide on 4-12-12.
6. Yield, test weight.
7. DAT = Days after various POST applications;
   Ratings at 7 days after the V2, 11"CN, and 20"CN were on 5-9-12, 5-22-12, and 6-1-12, respectively.
   Ratings at 21 days after the V2, 11"CN, and 20"CN were on 5-23-12, 6-5-12, and 6-15-12, respectively.
   Ratings at 42 days after the V2, 11"CN, and 20"CN were on 6-13-12, 6-26-12, and 7-6-12, respectively.
8. GRORED = Growth reduction, there was no chlorosis nor necrosis observed at any time.
9. Harvested 9-24-12, (2) 30 inch rows by 16 ft.

Endigo ZCX Insect Control in Corn - Site 1.

Trial ID: 12-ARC-8E-N140
Location: Agronomy Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-20-12

Trial Location

City: Carbondale
State/Prov.: IL
Postal Code: 62901
Country: USA

Objectives:
Evaluate efficacy of Endigo ZCX and foliar insecticides against silk-clipping and ear-feeding insects and the impact of the insecticides on the crop.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: P1395R **Description:** RR2
BBCH Scale: BCOR **Planting Date:** 4-20-12
Planting Method: SEEDED Seeded **Rate, Unit:** 28500 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: I **Code:** HELIAR Helicoverpa zea
Common Name: Corn earworm

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 198 LB/A, P2O5 46 LB/A, K2O 120 LB/A
2.	LIME 2 TON/A FALL 2011

Soil Description

% OM: 2.7 **Texture:** SIL SILT LOAM
pH: 5.3
CEC: 11.2

Additional Measured Elements

Element	Quantity	Unit
P1	100	LB/A
K	248	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Carbondale IL **Distance, Unit:** 0.5 MI

Endigo ZCX Insect Control in Corn - Site 1.

Trial ID: 12-ARC-8E-N140
Location: Agronomy Res. Center
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-10-12					7	DAY	30.1	79.2	F
2.	4-15-12	0.43	IN	RAIN	rain					
3.	4-16-12	0.39	IN	RAIN	rain					
4.	4-17-12					7	DAY	36.7	75.6	F
5.	4-20-12	0.25	IN	RAIN	rain					
6.	4-22-12	0.09	IN	RAIN	rain					
7.	4-24-12					7	DAY	43.7	80.9	F
8.	4-27-12	0.08	IN	RAIN	rain					
9.	4-30-12	0.05	IN	RAIN	rain					
10.	5-1-12					7	DAY	59.1	91.3	F
11.	5-4-12	0.02	IN	RAIN	rain					
12.	5-7-12	0.08	IN	RAIN	rain					
13.	5-8-12					7	DAY	43.3	79	F
14.	5-15-12					7	DAY	44.9	89.1	F
15.	5-20-12	0.4	IN	RAIN	rain					
16.	5-22-12					7	DAY	45.5	92.8	F
17.	5-29-12					7	DAY	46.3	89.8	F
18.	5-29-12	0.02	IN	RAIN	rain					
19.	5-30-12	0.02	IN	RAIN	rain					
20.	5-31-12	0.16	IN	RAIN	rain					
21.	6-4-12	0.16	IN	RAIN	rain					
22.	6-5-12					7	DAY	48.5	88.8	F
23.	6-11-12	0.62	IN	RAIN	rain					
24.	6-12-12					7	DAY	49.8	91.1	F
25.	6-17-12	0.06	IN	RAIN	rain					
26.	6-19-12					7	DAY	55.4	96.4	F
27.	6-26-12					7	DAY	51.1	105.4	F
28.	7-3-12					7	DAY	71.1	105	F
29.	7-8-12	1.15	IN	RAIN	rain					
30.	7-10-12					7	DAY	65.9	93.9	F
31.	7-14-12	0.11	IN	RAIN	rain					
32.	7-16-12	0.02	IN	RAIN	rain					
33.	7-17-12					7	DAY	60	102.3	F
34.	7-17-12	0.02	IN	RAIN	rain					
35.	7-23-12	0.02	IN	RAIN	rain					
36.	7-24-12					7	DAY	64.1	102.1	F
37.	7-26-12	0.53	IN	RAIN	rain					
38.	7-27-12	0.02	IN	RAIN	rain					
39.	7-29-12	0.27	IN	RAIN	rain					
40.	7-31-12					7	DAY	62.7	97.9	F
41.	8-2-12	0.02	IN	RAIN	rain					
42.	8-3-12	0.02	IN	RAIN	rain					
43.	8-4-12	2.83	IN	RAIN	rain					
44.	8-5-12	2.09	IN	RAIN	rain					
45.	8-7-12					7	DAY	54.1	97.2	F
46.	8-13-12	0.38	IN	RAIN	rain					
47.	8-14-12					7	DAY	51.2	92.5	F
48.	8-16-12	0.66	IN	RAIN	rain					
49.	8-21-12					7	DAY	54.6	94.1	F
50.	8-31-12	1.54	IN	RAIN	rain					

Endigo ZCX Insect Control in Corn - Site 1.

Trial ID: 12-ARC-8E-N140
Location: Agronomy Res. Center
Investigator: Bryan Young

Application Description

	A
Application Date:	7-3-12
Time of Day:	9:00
Application Method:	Spray
Application Timing:	R1
Application Placement:	BROFOL
Applied By:	NRJ
Air Temperature, Unit:	87 F
% Relative Humidity:	50
Wind Velocity, Unit:	3 MPH
Wind Direction:	W
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	84 F
Soil Moisture:	BELNOR
% Cloud Cover:	10
Next Rain Occurred On:	7-8-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMD BCOR
Stage Scale Used:	DESC
Stage Majority, Percent:	R1
Stage Minimum, Percent:	VT
Stage Maximum, Percent:	R1
Height, Unit:	120 IN
Height Minimum, Maximum:	72 120

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	HELIAR I DESC
Stage Majority, Percent:	NA

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	110015
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	10 GPA

Endigo ZCX Insect Control in Corn - Site 1.

Trial ID: 12-ARC-8E-N140
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 9-25-12 Moisture Percent	ZEAMD 9-25-12 Test wt. lb/bu	ZEAMD 9-25-12 Yield bu/A	ZEAMD 7-7-12 Injury Percent 4 DA-A	ZEAMD 7-10-12 Injury Percent 7 DA-A	ZEAMD 7-17-12 Injury Percent 14 DA-A
1	NONTREATED									14.2 abc	60.4 a	26 a	0 b	0 a	0 a
2	ENDIGO	2.06	ZC	4.5	fl oz/a	81	g ai/ha	R1	A	13.6 cd	55.2 a	25 a	2 a	0 a	0 a
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A						
3	ENDIGO ZCX	2.71	ZC	4.5	fl oz/a	107	g ai/ha	R1	A	14.8 a	62.5 a	36 a	0 b	0 a	0 a
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A						
4	QUILT XCEL	2.2	SC	13	fl oz/a	250	g ai/ha	R1	A	14.9 a	60.5 a	22 a	2 a	2 a	0 a
	WARRIOR II	2.09	CS	1.91	fl oz/a	35	g ai/ha	R1	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A						
5	A20007	3.15	ZE	13	fl oz/a	360	g ai/ha	R1	A	14.7 ab	62.9 a	29 a	3 a	2 a	0 a
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A						
6	QUILT XCEL	2.2	SC	13	fl oz/a	250	g ai/ha	R1	A	13.0 d	53.1 a	21 a	2 a	0 a	0 a
7	COBALT ADVANCED	2.63	EC	32	fl oz/a	740	g ai/ha	R1	A	15.2 a	64.8 a	24 a	3 a	0 a	0 a
8	HEADLINE	2.08	SC	12.1	fl oz/a	220	g ai/ha	R1	A	14.5 abc	58.7 a	30 a	3 a	2 a	0 a
	COBALT ADVANCED	2.63	EC	32	fl oz/a	740	g ai/ha	R1	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A						
9	WARRIOR II	2.09	CS	1.91	fl oz/a	35	g ai/ha	R1	A	13.7 bcd	56.0 a	33 a	2 ab	0 a	0 a
10	BESIEGE	1.25	ZC	9	fl oz/a	99	g ai/ha	R1	A	14.6 abc	63.7 a	23 a	3 a	0 a	0 a
LSD (P=.05)										1.11	8.52	18.5	1.6	1.4	0.0
Standard Deviation										0.76	5.71	12.8	1.1	1.0	0.0
CV										5.32	9.56	47.42	56.35	218.49	0.0
Replicate F										0.355	0.492	11.046	0.984	0.310	0.000
Replicate Prob(F)										0.7857	0.6927	0.0001	0.4149	0.8177	1.0000
Treatment F										3.248	1.883	0.594	4.109	2.172	0.000
Treatment Prob(F)										0.0084	0.1248	0.7901	0.0020	0.0577	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Endigo ZCX Insect Control in Corn - Site 1.

Trial ID: 12-ARC-8E-N140
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	HELIAR ZEAMD 7-17-12 Control Percent 14 DA-A	HELIAR ZEAMD 7-31-12 Control Percent 28 DA-A	ZEAMD 7-17-12 Lodging Percent 14 DA-A	ZEAMD 7-17-12 Insects /10 Ears 14 DA-A	ZEAMD 7-31-12 Insects / 5 Ears 28 DA-A
1	NONTREATED									85 a	71 a	9 a	1.0 a	1.3 a
2	ENDIGO	2.06	ZC	4.5	fl oz/a	81	g ai/ha	R1	A	83 a	78 a	3 a	0.8 a	1.0 a
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A					
3	ENDIGO ZCX	2.71	ZC	4.5	fl oz/a	107	g ai/ha	R1	A	82 a	73 a	3 a	0.5 a	1.5 a
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A					
4	QUILT XCEL	2.2	SC	13	fl oz/a	250	g ai/ha	R1	A	88 a	65 a	4 a	1.3 a	2.0 a
	WARRIOR II	2.09	CS	1.91	fl oz/a	35	g ai/ha	R1	A					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A					
5	A20007	3.15	ZE	13	fl oz/a	360	g ai/ha	R1	A	81 a	78 a	6 a	0.5 a	1.8 a
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A					
6	QUILT XCEL	2.2	SC	13	fl oz/a	250	g ai/ha	R1	A	86 a	80 a	8 a	1.0 a	1.0 a
7	COBALT ADVANCED	2.63	EC	32	fl oz/a	740	g ai/ha	R1	A	94 a	71 a	5 a	0.8 a	2.3 a
8	HEADLINE	2.08	SC	12.1	fl oz/a	220	g ai/ha	R1	A	86 a	75 a	9 a	1.3 a	2.3 a
	COBALT ADVANCED	2.63	EC	32	fl oz/a	740	g ai/ha	R1	A					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A					
9	WARRIOR II	2.09	CS	1.91	fl oz/a	35	g ai/ha	R1	A	85 a	73 a	5 a	0.3 a	1.5 a
10	BESIEGE	1.25	ZC	9	fl oz/a	99	g ai/ha	R1	A	86 a	74 a	8 a	0.5 a	1.0 a
LSD (P=.05)										14.4	16.4	6.0	1.40	1.61
Standard Deviation										9.9	11.3	4.1	0.97	1.11
CV										11.61	15.35	68.47	124.84	71.65
Replicate F										2.121	2.664	14.063	0.525	3.162
Replicate Prob(F)										0.1209	0.0680	0.0001	0.6687	0.0407
Treatment F										0.501	0.549	1.323	0.501	0.802
Treatment Prob(F)										0.8607	0.8256	0.2714	0.8604	0.6181

Endigo ZCX Insect Control in Corn - Site 1.

Trial ID: 12-ARC-8E-N140
Location: Agronomy Res. Center
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval							ZEAMD 7-17-12 Ears Damgd Percent 14 DA-A	ZEAMD 7-31-12 Ears Damgd Percent 28 DA-A	ZEAMD 7-17-12 Damgd Kern /10 Ears 14 DA-A	ZEAMD 7-17-12 Damgd Kern cm2 14 DA-A	ZEAMD 7-17-12 Disease Percent 14 DA-A
Trt Treatment No. Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1 NONTREATED									28 a	70 a	9.5 a	3.8 a	0 a
2 ENDIGO COC (PRIME OIL)	2.06 100	ZC SL	4.5 1	fl oz/a % v/v	81 1	g ai/ha % v/v	R1 R1	A A	28 a	60 a	14.8 a	5.8 a	0 a
3 ENDIGO ZCX COC (PRIME OIL)	2.71 100	ZC SL	4.5 1	fl oz/a % v/v	107 1	g ai/ha % v/v	R1 R1	A A	28 a	65 a	5.8 a	2.3 a	0 a
4 QUILT XCEL WARRIOR II COC (PRIME OIL)	2.2 2.09 100	SC CS SL	13 1.91 1	fl oz/a fl oz/a % v/v	250 35 1	g ai/ha g ai/ha % v/v	R1 R1 R1	A A A	23 a	90 a	1.0 a	0.4 a	0 a
5 A20007 COC (PRIME OIL)	3.15 100	ZE SL	13 1	fl oz/a % v/v	360 1	g ai/ha % v/v	R1 R1	A A	30 a	55 a	4.0 a	1.6 a	0 a
6 QUILT XCEL	2.2	SC	13	fl oz/a	250	g ai/ha	R1	A	20 a	55 a	11.8 a	4.7 a	0 a
7 COBALT ADVANCED	2.63	EC	32	fl oz/a	740	g ai/ha	R1	A	13 a	70 a	0.0 a	0.0 a	0 a
8 HEADLINE COBALT ADVANCED COC (PRIME OIL)	2.08 2.63 100	SC EC SL	12.1 32 1	fl oz/a fl oz/a % v/v	220 740 1	g ai/ha g ai/ha % v/v	R1 R1 R1	A A A	23 a	60 a	10.0 a	3.8 a	0 a
9 WARRIOR II	2.09	CS	1.91	fl oz/a	35	g ai/ha	R1	A	25 a	70 a	5.3 a	2.0 a	0 a
10 BESIEGE	1.25	ZC	9	fl oz/a	99	g ai/ha	R1	A	28 a	70 a	0.0 a	0.0 a	0 a
LSD (P=.05)									24.0	30.0	15.87	6.22	0.0
Standard Deviation									16.6	20.6	10.93	4.29	0.0
CV									68.26	31.05	176.37	176.01	0.0
Replicate F									2.467	3.276	0.612	0.567	0.000
Replicate Prob(F)									0.0837	0.0362	0.6130	0.6412	1.0000
Treatment F									0.386	0.993	0.889	0.888	0.000
Treatment Prob(F)									0.9314	0.4685	0.5476	0.5478	1.0000

Endigo ZCX Insect Control in Corn - Site 1.

Trial ID: 12-ARC-8E-N140
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 7-17-12 Reduc Vigor Percent 14 DA-A	ZEAMD 7-17-12 Barren Ears /10 Ears 14 DA-A	ZEAMD 9-6-12 Senescence Percent EOS
1	NONTREATED									0 a	1.8 a	88 a
2	ENDIGO	2.06	ZC	4.5	fl oz/a	81	g ai/ha	R1	A	0 a	2.3 a	90 a
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A			
3	ENDIGO ZCX	2.71	ZC	4.5	fl oz/a	107	g ai/ha	R1	A	0 a	0.8 a	90 a
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A			
4	QUILT XCEL	2.2	SC	13	fl oz/a	250	g ai/ha	R1	A	5 a	2.3 a	80 a
	WARRIOR II	2.09	CS	1.91	fl oz/a	35	g ai/ha	R1	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A			
5	A20007	3.15	ZE	13	fl oz/a	360	g ai/ha	R1	A	3 a	1.5 a	86 a
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A			
6	QUILT XCEL	2.2	SC	13	fl oz/a	250	g ai/ha	R1	A	3 a	2.8 a	85 a
7	COBALT ADVANCED	2.63	EC	32	fl oz/a	740	g ai/ha	R1	A	5 a	2.5 a	84 a
8	HEADLINE	2.08	SC	12.1	fl oz/a	220	g ai/ha	R1	A	3 a	1.5 a	84 a
	COBALT ADVANCED	2.63	EC	32	fl oz/a	740	g ai/ha	R1	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A			
9	WARRIOR II	2.09	CS	1.91	fl oz/a	35	g ai/ha	R1	A	3 a	2.0 a	84 a
10	BESIEGE	1.25	ZC	9	fl oz/a	99	g ai/ha	R1	A	0 a	2.5 a	83 a
LSD (P=.05)										7.1	1.96	10.8
Standard Deviation										4.9	1.35	7.5
CV										243.43	68.26	8.75
Replicate F										0.844	19.563	10.374
Replicate Prob(F)										0.4820	0.0001	0.0001
Treatment F										0.656	0.808	0.763
Treatment Prob(F)										0.7398	0.6126	0.6507

Southern Illinois University

Endigo ZCX Insect Control in Corn - Site 1.

Trial ID: 12-ARC-8E-N140
Location: Agronomy Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Syngenta (751 2012).
2. Ratings: CI at 3 and 7 DAT, continue if injury persists.
   Insect counts (insects per 10 ears) at 14 DAT;
   Percent insect control at 14 and 28 DAT; Percent ear damage (cm2 damaged kernels) at 14 DAT (R3-R4);
   Percent disease severity, and percent vigor at 14 DAT.
   Percent delayed senescence when nontreated is at 80% brown tissue.
3. Application timing is threshold when the insect population is increasing or R1, target Japanese beetles.
4. Blanket POST application of Roundup Powermax (22 floz/A) + Degree Xtra (3 qt/A) + Aatrex (1 qt/A)
   was applied to all plots 10 ft wide on 5-10-12.
5. Yield if possible, destroy grain from non-registered products for corn use.
6. HELIAR = Helicoverpa zea, Corn earworm.
   HELIAR, Control, Percent = Control based on number of insects rather than compared to the nontreated.
   Insects, /10 Ears = Number of insects per 10 ears. Insects, / 5 Ears = Number of insects per 5 ears.
   Ears Damgd, Percent = Percentage of ears damaged, tip or kernel feeding.
   Damgd Kern, /10 Ears = Number of damaged kernels per 10 ears.
   Damgd Kern, cm2 = Damaged kernels, square centimeters per 10 ears.
   Reduc Vigor = Reduction in vigor compared to the nontreated.
   Barren Ears, /10 Ears, Number of ears that failed to pollinate due to hot dry weather per 10 ears.
   Senescence = Percentage of plant with brown tissue when the nontreated was at 90% brown tissue.
7. Harvested 9-25-12, (2) 30 inch rows by 27 ft.

Endigo ZCX Insect Control in Corn - Site 2.

Trial ID: 12-Syngenta-Cowden
Location: Cowden, IL
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-24-12

Trial Location

City: Cowden **Latitude of LL Corner °:** 39.261511 N
State/Prov.: IL **Longitude of LL Corner °:** 88.915578 W
Postal Code: 62422 **Altitude of LL Corner, Unit:** 574.00 FT
Country: USA
Angle y-axis to North °: 0.00

Objectives:
Evaluate efficacy of Endigo ZCX and foliar insecticides against silk-clipping and ear-feeding insects and the impact of the insecticides on the crop.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: Syngenta N68B
BBCH Scale: BCOR **Planting Date:** 4-24-12
Planting Method: SEEDED Seeded
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: I **Code:** HELIAR Helicoverpa zea
Common Name: Corn earworm

Pest 2 Type: I **Code:** POPIJA Popillia japonica
Common Name: Japanese beetle

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Year
1.	2011

Soil Description

% Sand: 10.3 **% OM:** 4.19 **Texture:** SIL SILT LOAM
% Silt: 73.8 **pH:** 5.7 **Soil Name:** Wynoose / Parke
% Clay: 15.9 **CEC:** 13.74

Additional Measured Elements

Element	Quantity	Unit
P1	84	LB/A
K	248	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: COLES CO MEMO AIRPORT (53802) **Distance, Unit:** 33 MI

Endigo ZCX Insect Control in Corn - Site 2.

Trial ID: 12-Syngenta-Cowden
Location: Cowden, IL
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-1-12					7	DAY	32	84	F
2.	4-1-12	0.02	IN	RAIN	rain					
3.	4-4-12	0.44	IN	RAIN	rain					
4.	4-5-12	0.76	IN	RAIN	rain					
5.	4-8-12					7	DAY	27	68	F
6.	4-13-12	0.03	IN	RAIN	rain					
7.	4-14-12	1.85	IN	RAIN	rain					
8.	4-15-12					7	DAY	41	75	F
9.	4-15-12	0.28	IN	RAIN	rain					
10.	4-16-12	0.12	IN	RAIN	rain					
11.	4-20-12	0.22	IN	RAIN	rain					
12.	4-22-12					7	DAY	32	74	F
13.	4-28-12	0.74	IN	RAIN	rain					
14.	4-29-12					7	DAY	46	86	F
15.	4-29-12	0.93	IN	RAIN	rain					
16.	4-30-12	0.11	IN	RAIN	rain					
17.	5-1-12	0.31	IN	RAIN	rain					
18.	5-4-12	0.09	IN	RAIN	rain					
19.	5-6-12					7	DAY	44	86	F
20.	5-13-12					7	DAY	44	88	F
21.	5-20-12					7	DAY	47	91	F
22.	5-20-12	0.3	IN	RAIN	rain					
23.	5-27-12					7	DAY	50	93	F
24.	5-29-12	0.07	IN	RAIN	rain					
25.	5-31-12	0.62	IN	RAIN	rain					
26.	6-1-12	0.02	IN	RAIN	rain					
27.	6-3-12					7	DAY	49	87	F
28.	6-4-12	0.08	IN	RAIN	rain					
29.	6-10-12					7	DAY	50	92	F
30.	6-11-12	0.13	IN	RAIN	rain					
31.	6-16-12	0.04	IN	RAIN	rain					
32.	6-17-12					7	DAY	56	92	F
33.	6-21-12	0.27	IN	RAIN	rain					
34.	6-24-12					7	DAY	53	104	F
35.	7-1-12					7	DAY	67	106	F
36.	7-8-12					7	DAY	62	94	F
37.	7-14-12	0.02	IN	RAIN	rain					
38.	7-15-12					7	DAY	60	102	F
39.	7-22-12					7	DAY	60	103	F
40.	7-29-12					7	DAY	64	100	F
41.	8-2-12	0.54	IN	RAIN	rain					
42.	8-5-12					7	DAY	52	96	F
43.	8-8-12	0.48	IN	RAIN	rain					
44.	8-9-12	0.56	IN	RAIN	rain					
45.	8-12-12					7	DAY	52	90	F
46.	8-13-12	0.24	IN	RAIN	rain					
47.	8-16-12	1.29	IN	RAIN	rain					
48.	8-19-12					7	DAY	53	91	F
49.	8-20-12	0.05	IN	RAIN	rain					
50.	8-26-12					7	DAY	59	88	F
51.	8-26-12	0.03	IN	RAIN	rain					
52.	8-27-12	0.5	IN	RAIN	rain					
53.	8-31-12	0.18	IN	RAIN	rain					

Endigo ZCX Insect Control in Corn - Site 2.

Trial ID: 12-Syngenta-Cowden
Location: Cowden, IL
Investigator: Bryan Young

Application Description

	A
Application Date:	7-6-12
Time of Day:	10:15
Application Method:	Spray
Application Timing:	R1
Application Placement:	BROFOL
Applied By:	NRJ
Air Temperature, Unit:	98 F
% Relative Humidity:	41
Wind Velocity, Unit:	2 MPH
Wind Direction:	N
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	80 F
Soil Moisture:	BELNOR
% Cloud Cover:	5
Next Rain Occurred On:	7-14-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMD BCOR
Stage Scale Used:	DESC
Stage Majority, Percent:	R1
Stage Minimum, Percent:	VT
Stage Maximum, Percent:	R1
Height, Unit:	120 IN
Height Minimum, Maximum:	72 120

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	HELIAR I DESC
Stage Majority, Percent:	NA
Pest 2 Code, Type, Scale:	POPIJA I DESC
Stage Majority, Percent:	NA

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	110015
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	10 GPA

Endigo ZCX Insect Control in Corn - Site 2.

Trial ID: 12-Syngenta-Cowden
Location: Cowden, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 8-29-12 Moisture Percent 54 DA-A	ZEAMD 8-29-12 Yield bu/A 54 DA-A	ZEAMD 7-9-12 Injury Percent 3 DA-A	ZEAMD 7-13-12 Injury Percent 7 DA-A	ZEAMD 7-20-12 Injury Percent 14 DA-A	INSECTS ZEAMD 7-20-12 Control Percent 14 DA-A	INSECTS ZEAMD 8-3-12 Control Percent 28 DA-A
1	NONTREATED									22.1 a	41 a	0 a	0 a	0 a	89 b	96 a
2	ENDIGO	2.06	ZC	4.5	fl oz/a	81	g ai/ha	R1	A	20.8 a	40 a	0 a	0 a	0 a	96 a	96 a
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A							
3	ENDIGO ZCX	2.71	ZC	4.5	fl oz/a	107	g ai/ha	R1	A	21.3 a	43 a	0 a	0 a	0 a	98 a	99 a
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A							
4	QUILT XCEL	2.2	SC	13	fl oz/a	250	g ai/ha	R1	A	18.5 a	50 a	0 a	0 a	0 a	96 a	99 a
	WARRIOR II	2.09	CS	1.91	fl oz/a	35	g ai/ha	R1	A							
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A							
5	A20007	3.15	ZE	13	fl oz/a	360	g ai/ha	R1	A	21.0 a	39 a	1 a	0 a	0 a	93 ab	99 a
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A							
6	QUILT XCEL	2.2	SC	13	fl oz/a	250	g ai/ha	R1	A	21.2 a	38 a	0 a	0 a	0 a	80 c	99 a
7	COBALT ADVANCED	2.63	EC	32	fl oz/a	740	g ai/ha	R1	A	18.9 a	45 a	0 a	0 a	0 a	97 a	96 a
8	HEADLINE	2.08	SC	12.1	fl oz/a	220	g ai/ha	R1	A	22.8 a	33 a	0 a	0 a	0 a	94 ab	99 a
	COBALT ADVANCED	2.63	EC	32	fl oz/a	740	g ai/ha	R1	A							
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A							
9	WARRIOR II	2.09	CS	1.91	fl oz/a	35	g ai/ha	R1	A	20.4 a	52 a	0 a	0 a	0 a	95 ab	99 a
10	BESIEGE	1.25	ZC	9	fl oz/a	99	g ai/ha	R1	A	21.7 a	52 a	0 a	0 a	0 a	94 ab	99 a
LSD (P=.05)										4.26	25.7	0.7	0.0	0.0	7.1	5.0
Standard Deviation										2.93	17.7	0.5	0.0	0.0	4.9	3.4
CV										14.05	40.68	632.46	0.0	0.0	5.28	3.52
Replicate F										2.686	4.471	1.000	0.000	0.000	1.479	3.714
Replicate Prob(F)										0.0673	0.0117	0.4079	1.0000	1.0000	0.2425	0.0239
Treatment F										0.816	0.527	1.000	0.000	0.000	4.604	0.963
Treatment Prob(F)										0.6066	0.8412	0.4635	1.0000	1.0000	0.0009	0.4914

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Endigo ZCX Insect Control in Corn - Site 2.

Trial ID: 12-Syngenta-Cowden
Location: Cowden, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	HELIAR ZEAMD 7-20-12 Insects /10 Ears 14 DA-A	POPIJA ZEAMD 7-20-12 Insects /10 Ears 14 DA-A	INSECTS ZEAMD 8-3-12 Insects / 5 Ears 28 DA-A	ZEAMD 7-20-12 Ears Damgd Percent 14 DA-A	ZEAMD 8-3-12 Ears Damgd Percent 28 DA-A
1	NONTREATED									0.3 a	0.5 a	0.0 a	3 a	5 a
2	ENDIGO	2.06	ZC	4.5	fl oz/a	81	g ai/ha	R1	A	0.3 a	0.3 a	0.0 a	3 a	5 a
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A					
3	ENDIGO ZCX	2.71	ZC	4.5	fl oz/a	107	g ai/ha	R1	A	0.0 a	0.3 a	0.0 a	0 a	0 a
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A					
4	QUILT XCEL	2.2	SC	13	fl oz/a	250	g ai/ha	R1	A	0.3 a	0.5 a	0.0 a	3 a	0 a
	WARRIOR II	2.09	CS	1.91	fl oz/a	35	g ai/ha	R1	A					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A					
5	A20007	3.15	ZE	13	fl oz/a	360	g ai/ha	R1	A	0.0 a	0.8 a	0.0 a	3 a	0 a
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A					
6	QUILT XCEL	2.2	SC	13	fl oz/a	250	g ai/ha	R1	A	0.0 a	0.0 a	0.0 a	3 a	0 a
7	COBALT ADVANCED	2.63	EC	32	fl oz/a	740	g ai/ha	R1	A	0.0 a	0.5 a	0.0 a	0 a	5 a
8	HEADLINE	2.08	SC	12.1	fl oz/a	220	g ai/ha	R1	A	0.5 a	0.5 a	0.0 a	3 a	0 a
	COBALT ADVANCED	2.63	EC	32	fl oz/a	740	g ai/ha	R1	A					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A					
9	WARRIOR II	2.09	CS	1.91	fl oz/a	35	g ai/ha	R1	A	0.0 a	0.8 a	0.0 a	0 a	0 a
10	BESIEGE	1.25	ZC	9	fl oz/a	99	g ai/ha	R1	A	0.0 a	0.8 a	0.0 a	3 a	0 a
LSD (P=.05)										0.61	1.13	0.00	6.0	7.2
Standard Deviation										0.42	0.78	0.00	4.1	4.9
CV										336.43	164.45	0.0	235.22	328.17
Replicate F										0.895	5.067	0.000	1.328	3.714
Replicate Prob(F)										0.4563	0.0065	1.0000	0.2859	0.0239
Treatment F										0.707	0.405	0.000	0.344	0.963
Treatment Prob(F)										0.6976	0.9213	1.0000	0.9513	0.4914

Endigo ZCX Insect Control in Corn - Site 2.

Trial ID: 12-Syngenta-Cowden
Location: Cowden, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 7-20-12 Damgd Kern /10 Ears 14 DA-A	ZEAMD 7-20-12 Damgd Kern cm2 14 DA-A	ZEAMD 7-20-12 Silk Clip Percent 14 DA-A	ZEAMD 7-20-12 Disease Percent 14 DA-A	ZEAMD 7-20-12 Reduc Vigor Percent 14 DA-A	ZEAMD 8-13-12 Senescence Percent 38 DA-A
1	NONTREATED									0.0 a	0.00 a	20 b	0 a	0 a	55 a
2	ENDIGO	2.06	ZC	4.5	fl oz/a	81	g ai/ha	R1	A	0.0 a	0.00 a	5 c	0 a	3 a	64 a
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A						
3	ENDIGO ZCX	2.71	ZC	4.5	fl oz/a	107	g ai/ha	R1	A	0.0 a	0.00 a	3 c	0 a	5 a	56 a
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A						
4	QUILT XCEL	2.2	SC	13	fl oz/a	250	g ai/ha	R1	A	0.0 a	0.00 a	5 c	0 a	5 a	58 a
	WARRIOR II	2.09	CS	1.91	fl oz/a	35	g ai/ha	R1	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A						
5	A20007	3.15	ZE	13	fl oz/a	360	g ai/ha	R1	A	0.8 a	0.21 a	8 bc	0 a	0 a	63 a
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A						
6	QUILT XCEL	2.2	SC	13	fl oz/a	250	g ai/ha	R1	A	0.0 a	0.00 a	38 a	0 a	3 a	65 a
7	COBALT ADVANCED	2.63	EC	32	fl oz/a	740	g ai/ha	R1	A	0.0 a	0.00 a	5 c	0 a	0 a	79 a
8	HEADLINE	2.08	SC	12.1	fl oz/a	220	g ai/ha	R1	A	0.0 a	0.00 a	10 bc	0 a	3 a	56 a
	COBALT ADVANCED	2.63	EC	32	fl oz/a	740	g ai/ha	R1	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	R1	A						
9	WARRIOR II	2.09	CS	1.91	fl oz/a	35	g ai/ha	R1	A	0.0 a	0.00 a	10 bc	0 a	0 a	64 a
10	BESIEGE	1.25	ZC	9	fl oz/a	99	g ai/ha	R1	A	0.0 a	0.00 a	10 bc	0 a	0 a	74 a
LSD (P=.05)										0.69	0.196	14.9	0.0	4.8	29.1
Standard Deviation										0.47	0.135	10.3	0.0	3.3	20.0
CV										632.46	632.46	91.12	0.0	189.68	31.69
Replicate F										1.000	1.000	2.181	0.000	3.857	2.623
Replicate Prob(F)										0.4079	0.4079	0.1134	1.0000	0.0203	0.0710
Treatment F										1.000	1.000	4.137	0.000	1.538	0.612
Treatment Prob(F)										0.4635	0.4635	0.0020	1.0000	0.1851	0.7757

Southern Illinois University

Endigo ZCX Insect Control in Corn - Site 2.

Trial ID: 12-Syngenta-Cowden
Location: Cowden, IL
Investigator: Bryan Young

Trial Comments

1. Protocol: Syngenta (752 2012).
2. Ratings: CI at 3 and 7 DAT, continue if injury persists.
   Insect counts (insects per 10 ears) at 14 DAT;
   Percent insect control at 14 and 28 DAT; Percent ear damage (cm2 damaged kernels) at 14 DAT (R3-R4);
   Percent disease severity, and percent vigor at 14 DAT.
   Percent delayed senescence when nontreated is at 80% brown tissue.
3. Application timing is threshold when the insect population is increasing or R1, target CRW.
4. Yield if possible, destroy grain from non-registered products for corn use.
5. HELIAR = Corn ear worm. POPIJA = Japanese beetle.
   Insects, /10 Ears = Number of insects per 10 ears. Insects, / 5 Ears = Number of insects per 5 ears.
   Insects, Control, Percent = Control based on number of insects rather than compared to the nontreated.
   Damgd Kern, /10 Ears = Number of damaged kernels per 10 ears.
   Damgd Kern, cm2 = Damaged kernels, square centimeters per 10 ears.
   Silk Clip = Silk clipping, Japanese beetles.
   Reduc Vigor = Reduction in vigor compared to the nontreated.
   Senescence = Percentage of plant with brown tissue when nontreated was
   at 55% (variable at 30, 75, 30, and 85% in reps 1 to 4) brown tissue.
6. Low yield overall and especially plots 103 and 108 was due to hot dry conditions
   and low ear production at pollination.
   Missing data at 28 DAT and yield for plot 104 was due to destructive sampling of ears at 14 DAT.
   Destructive sampling at 14 DAT was removal of 10 ears per plot.
7. Harvested 8-29-12 (2) 30 inch rows by 25 ft.

RyzUp SmartGrass in Corn.

Trial ID: 12-ARC-8E-S140
Location: Agronomy Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-20-12

Trial Location

City: Carbondale
State/Prov.: IL
Postal Code: 62901
Country: USA

Objectives:
Evaluate the influence of RyzUp on corn growth
and grain yield.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: P1395R **Description:** RR2
BBCH Scale: BCOR **Planting Date:** 4-20-12
Planting Method: SEEDED Seeded **Rate, Unit:** 28500 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Code: NA

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	LIME 2 TON/A FALL 2011
2.	N 198 LB/A, P2O5 46 LB/A, K2O 120 LB/A

Soil Description

% OM: 2.7 **Texture:** SIL SILT LOAM
pH: 5.3
CEC: 11.2

Additional Measured Elements

Element	Quantity	Unit
P1	100	LB/A
K	248	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Carbondale IL **Distance, Unit:** 0.5 MI

RyzUp SmartGrass in Corn.

Trial ID: 12-ARC-8E-S140
Location: Agronomy Res. Center
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-3-12					7	DAY	34.6	78.3	F
2.	4-10-12					7	DAY	30.1	79.2	F
3.	4-15-12	0.43	IN	RAIN	rain					
4.	4-16-12	0.39	IN	RAIN	rain					
5.	4-17-12					7	DAY	36.7	75.6	F
6.	4-20-12	0.25	IN	RAIN	rain					
7.	4-22-12	0.09	IN	RAIN	rain					
8.	4-24-12					7	DAY	43.7	80.9	F
9.	4-27-12	0.08	IN	RAIN	rain					
10.	4-30-12	0.05	IN	RAIN	rain					
11.	5-1-12					7	DAY	59.1	91.3	F
12.	5-4-12	0.02	IN	RAIN	rain					
13.	5-7-12	0.08	IN	RAIN	rain					
14.	5-8-12					7	DAY	43.3	79	F
15.	5-15-12					7	DAY	44.9	89.1	F
16.	5-20-12	0.4	IN	RAIN	rain					
17.	5-22-12					7	DAY	45.5	92.8	F
18.	5-29-12					7	DAY	46.3	89.8	F
19.	5-29-12	0.02	IN	RAIN	rain					
20.	5-30-12	0.02	IN	RAIN	rain					
21.	5-31-12	0.16	IN	RAIN	rain					
22.	6-4-12	0.16	IN	RAIN	rain					
23.	6-5-12					7	DAY	48.5	88.8	F
24.	6-11-12	0.62	IN	RAIN	rain					
25.	6-12-12					7	DAY	49.8	91.1	F
26.	6-17-12	0.06	IN	RAIN	rain					
27.	6-19-12					7	DAY	55.4	96.4	F
28.	6-26-12					7	DAY	51.1	105.4	F
29.	7-3-12					7	DAY	71.1	105	F
30.	7-8-12	1.15	IN	RAIN	rain					
31.	7-10-12					7	DAY	65.9	93.9	F
32.	7-14-12	0.11	IN	RAIN	rain					
33.	7-16-12	0.02	IN	RAIN	rain					
34.	7-17-12					7	DAY	60	102.3	F
35.	7-17-12	0.02	IN	RAIN	rain					
36.	7-23-12	0.02	IN	RAIN	rain					
37.	7-24-12					7	DAY	64.1	102.1	F
38.	7-26-12	0.53	IN	RAIN	rain					
39.	7-27-12	0.02	IN	RAIN	rain					
40.	7-29-12	0.27	IN	RAIN	rain					
41.	7-31-12					7	DAY	62.7	97.9	F
42.	8-2-12	0.02	IN	RAIN	rain					
43.	8-3-12	0.02	IN	RAIN	rain					
44.	8-4-12	2.83	IN	RAIN	rain					
45.	8-5-12	2.09	IN	RAIN	rain					
46.	8-7-12					7	DAY	54.1	97.2	F
47.	8-13-12	0.38	IN	RAIN	rain					
48.	8-14-12					7	DAY	51.2	92.5	F
49.	8-16-12	0.66	IN	RAIN	rain					
50.	8-21-12					7	DAY	54.6	94.1	F
51.	8-31-12	1.54	IN	RAIN	rain					

RyzUp SmartGrass in Corn.

Trial ID: 12-ARC-8E-S140
Location: Agronomy Res. Center
Investigator: Bryan Young

Application Description

	A	B
Application Date:	5-5-12	5-16-12
Time of Day:	9:00	16:00
Application Method:	Spray	Spray
Application Timing:	V2	V5
Application Placement:	BROFOL	BROFOL
Applied By:	RJW	RJW
Air Temperature, Unit:	80 F	82 F
% Relative Humidity:	63	46
Wind Velocity, Unit:	6 MPH	6 MPH
Wind Direction:	S	N
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	74 F	84 F
Soil Moisture:	NORMAL	BELNOR
% Cloud Cover:	30	50

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	ZEAMD BCOR
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	V2	V5
Stage Minimum, Percent:	V1	V5
Stage Maximum, Percent:	V2	V6
Height, Unit:	5 IN	8 IN
Height Minimum, Maximum:	4 5	6 8

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	NA DESC	NA DESC
Stage Majority, Percent:	NA	NA

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8003	8003
Boom Length, Unit:	10 FT	10 FT
Spray Volume, Unit:	20 GPA	20 GPA

RyzUp SmartGrass in Corn.

Trial ID: 12-ARC-8E-S140
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 9-25-12 Moisture Percent	ZEAMD 9-25-12 Test wt. lb/bu	ZEAMD 9-25-12 Yield bu/A	ZEAMD 5-15-12 Height cm 10 DA-A	ZEAMD 5-25-12 Height cm 20 DA-A	ZEAMD 6-4-12 Height cm 30 DA-A
1	NONTREATED									14.5 a	61.7 a	29 a	18 c	45 a	75 a
2	RYZUP SMARTGRASS	40 WG		0.0075	lb ai/a	0.3	oz/a	V2	A	15.0 a	63.0 a	34 a	20 a	46 a	76 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	V2	A						
3	RYZUP SMARTGRASS	40 WG		0.015	lb ai/a	0.6	oz/a	V2	A	14.2 a	59.0 a	38 a	20 ab	46 a	74 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	V2	A						
4	RYZUP SMARTGRASS	40 WG		0.0075	lb ai/a	0.3	oz/a	V5	B	14.9 a	62.4 a	27 a			
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	V5	B						
5	RYZUP SMARTGRASS	40 WG		0.015	lb ai/a	0.6	oz/a	V5	B	14.7 a	62.7 a	32 a			
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	V5	B						
6	NONTREATED												18 bc	45 a	73 a
7	RYZUP SMARTGRASS	40 WG		0.0075	lb ai/a	0.3	oz/a	V2	A				21 a	45 a	72 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	V2	A						
8	RYZUP SMARTGRASS	40 WG		0.015	lb ai/a	0.6	oz/a	V2	A				21 a	44 a	71 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	V2	A						
9	RYZUP SMARTGRASS	40 WG		0.0075	lb ai/a	0.3	oz/a	V5	B						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	V5	B						
10	RYZUP SMARTGRASS	40 WG		0.015	lb ai/a	0.6	oz/a	V5	B						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	V5	B						
LSD (P=.05)										0.85	5.54	26.7	1.8	3.6	5.3
Standard Deviation										0.55	3.39	17.3	1.2	2.4	3.5
CV										3.75	5.5	54.18	5.87	5.2	4.78
Replicate F										2.221	2.493	1.692	0.510	8.030	8.609
Replicate Prob(F)										0.1429	0.1342	0.2214	0.6820	0.0023	0.0017
Treatment F										1.461	0.904	0.252	4.612	0.319	1.102
Treatment Prob(F)										0.2792	0.5049	0.9027	0.0107	0.8932	0.4024

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

RyzUp SmartGrass in Corn.

Trial ID: 12-ARC-8E-S140
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 5-26-12 Height cm 10 DA-B	ZEAMD 6-5-12 Height cm 20 DA-B	ZEAMD 6-15-12 Height cm 30 DA-B	ZEAMD 5-15-12 SPAD 10 DA-A	ZEAMD 5-25-12 SPAD 20 DA-A	ZEAMD 6-4-12 SPAD 30 DA-A
1	NONTREATED									45 b	75 a	122 a	39.8 a	47.5 a	50.6 a
2	RYZUP SMARTGRASS	40 WG	0.0075	lb ai/a	0.3	oz/a		V2	A				39.7 a	45.8 a	50.2 a
	NIS (ACTIVATOR 90)	100 SL	0.25	% v/v	0.25	% v/v		V2	A						
3	RYZUP SMARTGRASS	40 WG	0.015	lb ai/a	0.6	oz/a		V2	A				39.4 a	45.8 a	53.3 a
	NIS (ACTIVATOR 90)	100 SL	0.25	% v/v	0.25	% v/v		V2	A						
4	RYZUP SMARTGRASS	40 WG	0.0075	lb ai/a	0.3	oz/a		V5	B	46 b	77 a	116 a			
	NIS (ACTIVATOR 90)	100 SL	0.25	% v/v	0.25	% v/v		V5	B						
5	RYZUP SMARTGRASS	40 WG	0.015	lb ai/a	0.6	oz/a		V5	B	47 b	79 a	125 a			
	NIS (ACTIVATOR 90)	100 SL	0.25	% v/v	0.25	% v/v		V5	B						
6	NONTREATED									45 b	74 a	123 a	39.2 a	46.1 a	51.0 a
7	RYZUP SMARTGRASS	40 WG	0.0075	lb ai/a	0.3	oz/a		V2	A				38.7 a	46.1 a	52.8 a
	NIS (ACTIVATOR 90)	100 SL	0.25	% v/v	0.25	% v/v		V2	A						
8	RYZUP SMARTGRASS	40 WG	0.015	lb ai/a	0.6	oz/a		V2	A				37.8 a	44.5 a	48.4 a
	NIS (ACTIVATOR 90)	100 SL	0.25	% v/v	0.25	% v/v		V2	A						
9	RYZUP SMARTGRASS	40 WG	0.0075	lb ai/a	0.3	oz/a		V5	B	48 ab	76 a	124 a			
	NIS (ACTIVATOR 90)	100 SL	0.25	% v/v	0.25	% v/v		V5	B						
10	RYZUP SMARTGRASS	40 WG	0.015	lb ai/a	0.6	oz/a		V5	B	50 a	78 a	129 a			
	NIS (ACTIVATOR 90)	100 SL	0.25	% v/v	0.25	% v/v		V5	B						
LSD (P=.05)										3.1	5.0	15.3	2.54	2.27	7.70
Standard Deviation										2.1	3.3	10.1	1.67	1.50	5.08
CV										4.48	4.31	8.24	4.28	3.25	9.95
Replicate F										5.806	4.047	0.869	2.348	1.033	0.057
Replicate Prob(F)										0.0077	0.0271	0.4789	0.1168	0.4082	0.9814
Treatment F										3.337	1.232	0.671	0.833	1.587	0.512
Treatment Prob(F)										0.0318	0.3424	0.6517	0.5473	0.2274	0.7630

RyzUp SmartGrass in Corn.

Trial ID: 12-ARC-8E-S140
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 5-26-12 SPAD 10 DA-B	ZEAMD 6-5-12 SPAD 20 DA-B	ZEAMD 6-15-12 SPAD 30 DA-B	ZEAMD 7-30-12 Silage 000 lb/A R5	ZEAMD 7-30-12 Plants 000/A R5
1	NONTREATED									47.7 a	50.6 a	51.4 a		
2	RYZUP SMARTGRASS	40 WG		0.0075	lb ai/a	0.3	oz/a	V2	A					
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	V2	A					
3	RYZUP SMARTGRASS	40 WG		0.015	lb ai/a	0.6	oz/a	V2	A					
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	V2	A					
4	RYZUP SMARTGRASS	40 WG		0.0075	lb ai/a	0.3	oz/a	V5	B	44.7 a	50.9 a	50.3 a		
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	V5	B					
5	RYZUP SMARTGRASS	40 WG		0.015	lb ai/a	0.6	oz/a	V5	B	45.0 a	51.4 a	50.5 a		
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	V5	B					
6	NONTREATED									46.4 a	52.8 a	51.3 a	28.0 a	30.0 a
7	RYZUP SMARTGRASS	40 WG		0.0075	lb ai/a	0.3	oz/a	V2	A				30.3 a	30.0 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	V2	A					
8	RYZUP SMARTGRASS	40 WG		0.015	lb ai/a	0.6	oz/a	V2	A				28.1 a	32.5 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	V2	A					
9	RYZUP SMARTGRASS	40 WG		0.0075	lb ai/a	0.3	oz/a	V5	B	43.8 a	49.9 a	52.3 a	29.9 a	30.3 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	V5	B					
10	RYZUP SMARTGRASS	40 WG		0.015	lb ai/a	0.6	oz/a	V5	B	47.7 a	50.7 a	48.0 a	26.2 a	31.5 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	V5	B					
LSD (P=.05)										4.16	5.72	3.37	5.56	3.55
Standard Deviation										2.76	3.80	2.23	3.61	2.31
CV										6.02	7.44	4.41	12.68	7.47
Replicate F										1.901	0.782	1.294	2.566	1.063
Replicate Prob(F)										0.1729	0.5223	0.3128	0.1033	0.4012
Treatment F										1.370	0.272	1.718	0.821	0.931
Treatment Prob(F)										0.2901	0.9213	0.1912	0.5365	0.4783

Southern Illinois University

RyzUp SmartGrass in Corn.

Trial ID: 12-ARC-8E-S140
Location: Agronomy Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Valent (MD 68.10).
2. Ratings: Corn height (10 plants per plot) to the uppermost horizontal leaf, vigor/color and SPAD meter (10 readings per plot, record a single mean SPAD value for each plot), at 10, 20, and 30 DAT. Spad, height and vigor of nontreated plots at each DAT timing.
3. Biomass yield (silage timing) from treatments 6 to 10. Cut corn plants 3 inch above the ground from a 8 ft 8.5 inch section of each of the center two rows (total area 17 ft 5 inch) and determine fresh weight. Count harvested plants.
4. Grain yield from treatments 1 to 5.
5. Apply when daytime temperatures are expected to be 75 degrees F or less if possible.
6. Maintain entire trial weed free. Blanket POST application of Degree Xtra (3 qt/A) plus Aatrex (1 qt/A) plus Roundup PowerMax (22 floz/A) was applied to all plots on 5-10-12.
7. SPAD = Minolta chlorophyll meter (model SPAD 502) reading on on the newest fully developed leaf.
8. Missing data for plot 207 was due to data collection error.
9. Harvested 9-25-12, (2) 30 inch rows by 27 ft.

Wheat

Southern Illinois University

Wheat Fungicide Trial.

Trial ID: 12-4-W100
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 10-14-11

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Evaluate early and late fungicide applications in winter wheat,
especially for control of leaf rust, striped rust, head scab and powdery mildew.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: TRZAW Triticum aestivum (winter) Winter wheat
Variety: P25R62
BBCH Scale: BCER **Planting Date:** 10-14-11
Planting Method: SEEDED Seeded **Rate, Unit:** 1.4 millionS/A
Depth, Unit: 1 IN
Row Spacing, Unit: 7.5 IN

Pest Description

Pest 1 Type: W **Code:** NA

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	BRSNN	2011

Maintenance

No.	Maintenance Treatment Name
1.	Fall: N 30 LB/A, P2O5 0 LB/A, K2O 0 LB/A
2.	Spring: N 85 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.5 **Texture:** SIL SILT LOAM
pH: 7.1 **Soil Name:** PIERRON
CEC: 6 **Fert. Level:** _ P1: 81 LB/A, K: 234 LB/A

Additional Measured Elements

Element	Quantity	Unit
P1	81	LB/A
K	234	LB/A

Southern Illinois University

Wheat Fungicide Trial.

Trial ID: 12-4-W100
Location: Belleville Res. Center
Investigator: Bryan Young

Application Description

	A	B	C	D
Application Date:	3-26-12	4-4-12	4-10-12	4-24-12
Time of Day:	10:00	12:00	14:00	9:00
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	FK6	FK9	FK10	FK10.51
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	RFK	RFK	RFK	RFK
Air Temperature, Unit:	62 F	64 F	71 F	60 F
% Relative Humidity:	63	93	23	52
Wind Velocity, Unit:	5 MPH	0 MPH	3 MPH	3 MPH
Wind Direction:	E	N	W	W
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	46 F	51 F	59 F	59 F
Soil Moisture:	ABONOR	ABONOR	NORMAL	ABONOR
% Cloud Cover:	0	100	0	100
Next Rain Occurred On:	3-27-12	4-4-12	4-11-12	4-25-12

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	TRZAW BCER	TRZAW BCER	TRZAW BCER	TRZAW BCER
Stage Scale Used:	DESC	DESC	DESC	DESC
Stage Majority, Percent:	FK6	FK9	FK10	FK10.51
Height, Unit:	14 IN	26 IN	31 IN	38 IN
Height Minimum, Maximum:	12 14	24 26	30 31	36 38

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	NA W DESC	NA W DESC	NA W DESC	NA W DESC
Stage Majority, Percent:	NA	NA	NA	NA

Application Equipment

	A	B	C	D
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR	XR
Nozzle Size:	8002	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA

Wheat Fungicide Trial.

Trial ID: 12-4-W100
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	TRZAW 6-6-12 Moisture Percent	TRZAW 6-6-12 Test wt. lb/bu	TRZAW 6-6-12 Yield bu/A	TRZAW Injury Percent 7DAT	TRZAW Injury Percent 14DAT	TRZAW Injury Percent 28DAT
1	TOPGUARD	1.04	SC	0.081	lb ai/a	10	fl oz/a	FK10	C	13.2 a	57.6 a	78 a	0 a	0 a	0 a
2	TOPGUARD	1.04	SC	0.114	lb ai/a	14	fl oz/a	FK10	C	13.0 a	57.7 a	79 a	0 a	0 a	0 a
3	TOPGUARD	1.04	SC	0.081	lb ai/a	10	fl oz/a	FK10	C	13.1 a	57.7 a	79 a	0 a	0 a	0 a
	KOVERALL	75	WG	1.125	lb ai/a	1.5	lb/a	FK10	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% ai/v	FK10	C						
4	TOPGUARD	1.04	SC	0.114	lb ai/a	14	fl oz/a	FK10	C	13.1 a	57.7 a	81 a	0 a	0 a	0 a
	KOVERALL	75	WG	1.5	lb ai/a	2	lb/a	FK10	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% ai/v	FK10	C						
5	PROSARO	3.52	SC	0.165	lb ai/a	6	fl oz/a	FK10	C	13.0 a	57.7 a	78 a	0 a	0 a	0 a
6	NONTREATED									13.0 a	57.7 a	81 a	0 a	0 a	0 a
7	STRATEGO YLD	4.18	SC	0.065	lb ai/a	2	fl oz/a	FK6	A	12.9 a	57.7 a	82 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.125	% v/v	0.125	% ai/v	FK6	A						
8	STRATEGO YLD	4.18	SC	0.13	lb ai/a	4	fl oz/a	FK6	A	12.9 a	57.8 a	81 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.125	% v/v	0.125	% ai/v	FK6	A						
9	STRATEGO YLD	4.18	SC	0.065	lb ai/a	2	fl oz/a	FK6	A	13.0 a	57.7 a	87 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.125	% v/v	0.125	% ai/v	FK6	A						
	PROSARO	3.52	SC	0.179	lb ai/a	6.5	fl oz/a	FK10.51	D						
	NIS (ACTIVATOR 90)	100	SL	0.125	% v/v	0.125	% ai/v	FK10.51	D						
10	PROSARO	3.52	SC	0.138	lb ai/a	5	fl oz/a	FK9	B	13.1 a	57.6 a	83 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.125	% v/v	0.125	% ai/v	FK9	B						
11	PROSARO	3.52	SC	0.179	lb ai/a	6.5	fl oz/a	FK10.51	D	13.2 a	57.6 a	83 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.125	% v/v	0.125	% ai/v	FK10.51	D						
12	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	FK10.51	D	13.3 a	57.5 a	82 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.125	% v/v	0.125	% v/v	FK10.51	D						
LSD (P=.05)										0.29	0.16	5.4	0.0	0.0	0.0
Standard Deviation										0.20	0.11	3.7	0.0	0.0	0.0
CV										1.52	0.19	4.57	0.0	0.0	0.0
Replicate F										0.418	2.693	2.245	0.000	0.000	0.000
Replicate Prob(F)										0.7414	0.0620	0.1014	1.0000	1.0000	1.0000
Treatment F										1.408	1.933	1.747	0.000	0.000	0.000
Treatment Prob(F)										0.2155	0.0709	0.1058	1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Wheat Fungicide Trial.

Trial ID: 12-4-W100
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	DISEASE TRZAW Incidence Percent 14DAT	DISEASE TRZAW Severity Percent 14DAT	DISEASE TRZAW Incidence Percent 28DAT	DISEASE TRZAW Severity Percent 28DAT	DISEASE TRZAW 5-15-12 Incidence Percent 21DA-D	DISEASE TRZAW 5-15-12 Severity Percent 21DA-D
1	TOPGUARD	1.04	SC	0.081	lb ai/a	10	fl oz/a	FK10	C	0 a	0 a	0 a	0 a	0 a	0 a
2	TOPGUARD	1.04	SC	0.114	lb ai/a	14	fl oz/a	FK10	C	0 a	0 a	0 a	0 a	0 a	0 a
3	TOPGUARD	1.04	SC	0.081	lb ai/a	10	fl oz/a	FK10	C	0 a	0 a	0 a	0 a	0 a	0 a
	KOVERALL	75	WG	1.125	lb ai/a	1.5	lb/a	FK10	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% ai/v	FK10	C						
4	TOPGUARD	1.04	SC	0.114	lb ai/a	14	fl oz/a	FK10	C	0 a	0 a	0 a	0 a	0 a	0 a
	KOVERALL	75	WG	1.5	lb ai/a	2	lb/a	FK10	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% ai/v	FK10	C						
5	PROSARO	3.52	SC	0.165	lb ai/a	6	fl oz/a	FK10	C	0 a	0 a	0 a	0 a	0 a	0 a
6	NONTREATED									0 a	0 a	0 a	0 a	0 a	0 a
7	STRATEGO YLD	4.18	SC	0.065	lb ai/a	2	fl oz/a	FK6	A	0 a	0 a	0 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.125	% v/v	0.125	% ai/v	FK6	A						
8	STRATEGO YLD	4.18	SC	0.13	lb ai/a	4	fl oz/a	FK6	A	0 a	0 a	0 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.125	% v/v	0.125	% ai/v	FK6	A						
9	STRATEGO YLD	4.18	SC	0.065	lb ai/a	2	fl oz/a	FK6	A	0 a	0 a	0 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.125	% v/v	0.125	% ai/v	FK6	A						
	PROSARO	3.52	SC	0.179	lb ai/a	6.5	fl oz/a	FK10.51	D						
	NIS (ACTIVATOR 90)	100	SL	0.125	% v/v	0.125	% ai/v	FK10.51	D						
10	PROSARO	3.52	SC	0.138	lb ai/a	5	fl oz/a	FK9	B	0 a	0 a	0 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.125	% v/v	0.125	% ai/v	FK9	B						
11	PROSARO	3.52	SC	0.179	lb ai/a	6.5	fl oz/a	FK10.51	D	0 a	0 a	0 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.125	% v/v	0.125	% ai/v	FK10.51	D						
12	QUILT XCEL	2.2	SC	0.18	lb ai/a	10.5	fl oz/a	FK10.51	D	0 a	0 a	0 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.125	% v/v	0.125	% v/v	FK10.51	D						
LSD (P=.05)										0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation										0.0	0.0	0.0	0.0	0.0	0.0
CV										0.0	0.0	0.0	0.0	0.0	0.0
Replicate F										0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Southern Illinois University

Wheat Fungicide Trial.

Trial ID: 12-4-W100
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Cheminova (FTRZAWTG1201.PRT), Bayer.
2. Ratings: CI as chlorosis, necrosis, stunting, and overall at 7 and 14 days after each application.
   Cercospora leaf spot ratings as percents at 14 day intervals and 14 and 21 days after the last application.
   Rate other diseases if present (leaf rust, striped rust, head scab and powdery mildew).
   Record disease incidence and severity in nontreated each time.
3. Yield a must, and grain grading if possible.
   RECORD RAINFALL THE FIRST WEEK PRIOR TO APPLICATION.
   Rainfall (inch) for the first week prior to the FK6, FK9, FK10, and FK10.51 applications was 0.59, 0.45, 0.70, and 2.35, respectively.
   RECORD DATE & AMOUNT OF FIRST RAINFALL FOLLOWING APPLICATION.
   Rainfall (inch) for the first rainfall following the FK6, FK9, FK10, and FK10.51 applications was 0.13, 0.22, 0.57, and 0.5, respectively.
   Date of first rainfall following the FK6, FK9, FK10, and FK10.51 applications was on 3-26-12, 4-9-12, 4-11-12, and 4-24-12, respectively.
   RECORD RAINFALL THROUGHOUT THE DURATION OF THE TRIAL.
   RECORD TEMPERATURE AND RELATIVE HUMIDITY THROUGHOUT THE DURATION OF THE TRIAL.
   See link to weather for the Belleville Research Center.
4. Plots were scouted throughout the growing season for leaf and head diseases with none found at any time.
5. DAT = Days after treatment.
   Ratings at 7 days after the FK6, FK9, FK10, and FK10.51 applications were on 4-2-12, 4-11-12, 4-17-12, and 5-1-12, respectively.
   Ratings at 14 days after the FK6, FK9, FK10, and FK10.51 applications were on 4-9-12, 4-18-12, 4-24-12, and 5-8-12, respectively.
   Ratings at 28 days after the FK6, FK9, FK10, and FK10.51 applications were on 4-23-12, 5-2-12, 5-8-12, and 5-22-12, respectively.
6. On 5-15-12, at 21 days after the last application, there was no disease in any plots, not in the nontreated, not in the any of the earlier application timing plots.
7. Harvested 6-6-12, 4.375 ft by 27 ft.

Foilar Fungicides in Wheat.

Trial ID: 12-6B
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 10-14-11

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:

Evaluate foliar fungcide programs for control of
leaf and head diseases in winter wheat.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: TRZAW Triticum aestivum (winter) Winter wheat
Variety: P25R62
BBCH Scale: BCER **Planting Date:** 10-14-11
Planting Method: SEEDED **Rate, Unit:** 1.4 millionS/A
Depth, Unit: 1 IN
Row Spacing, Unit: 7.5 IN

Pest Description

Pest 1 Type: W **Code:** NA

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 40 FT
Plot Area, Unit: 400 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	NONE	2011

Maintenance

No.	Maintenance Treatment Name
1.	Fall: N 30 LB/A, P2O5 0 LB/A, K2O 0 LB/A
2.	Spring: N 85 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.6 **Texture:** SIL SILT LOAM
pH: 6.5 **Soil Name:** CASEYVILLE
CEC: 6

Additional Measured Elements

Element	Quantity	Unit
P1	87	LB/A
K	321	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Southern Illinois University

Foilar Fungicides in Wheat.

Trial ID: 12-6B
Location: Belleville Res. Center
Investigator: Bryan Young

Application Description

	A	B	C
Application Date:	3-20-12	4-17-12	4-24-12
Time of Day:	9:00	11:00	9:00
Application Method:	Spray	Spray	Spray
Application Timing:	JOINT	HEAD	FLOWER
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	RFK	RFK	RFK
Air Temperature, Unit:	73 F	64 F	60 F
% Relative Humidity:	59	54	52
Wind Velocity, Unit:	5 MPH	0 MPH	3 MPH
Wind Direction:	SE	NE	W
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	49 F	54 F	59 F
Soil Moisture:	NORMAL	ABONOR	ABONOR
% Cloud Cover:	0	0	100
Next Rain Occurred On:	3-25-12	4-19-12	4-25-12

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	TRZAW BCER	TRZAW BCER	TRZAW BCER
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	FK5	FK10.4	FK10.5.1
Stage Minimum, Percent:	FK5	FK10.4	FK10.5.1
Stage Maximum, Percent:	FK5	FK10.4	FK10.5.1
Height, Unit:	8 IN	28 IN	38 IN
Height Minimum, Maximum:	6 8	26 28	36 38

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	NA W DESC	NA W DESC	NA W DESC
Stage Majority, Percent:	NA	NA	NA

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Foilar Fungicides in Wheat.

Trial ID: 12-6B
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	TRZAW 6-6-12 Moisture Percent	TRZAW 6-6-12 Test wt. lb/bu	TRZAW 6-6-12 Yield bu/A
1	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A	14.1 a	57.4 a	61 b
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	JOINT	A			
	PZX74	2.34	SC	0.091	lb ai/a	5	fl oz/a	HEAD	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	HEAD	B			
2	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A	14.3 a	57.3 a	62 b
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	JOINT	A			
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	HEAD	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	HEAD	B			
3	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A	14.2 a	57.3 a	61 b
	KOCIDE 3000	46.1	WG	0.346	lb ai/a	12	oz/a	JOINT	A			
	APROACH	2.08	SC	0.0488	lb ai/a	3	fl oz/a	JOINT	A			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	JOINT	A			
4	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A	14.1 a	57.4 a	61 b
	APROACH	2.08	SC	0.0488	lb ai/a	3	fl oz/a	JOINT	A			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	JOINT	A			
5	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A	14.5 a	57.2 a	66 a
	KOCIDE 3000	46.1	WG	0.346	lb ai/a	12	oz/a	JOINT	A			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	JOINT	A			
	PROSARO	3.52	SC	0.179	lb ai/a	6.5	fl oz/a	FLOWER	C			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FLOWER	C			
6	NONTREATED									14.2 a	57.4 a	60 b
LSD (P=.05)										0.63	0.17	2.8
Standard Deviation										0.35	0.09	1.6
CV										2.44	0.16	2.5
Replicate F										0.108	0.609	1.512
Replicate Prob(F)										0.8987	0.5631	0.2668
Treatment F										0.389	1.475	4.915
Treatment Prob(F)										0.8454	0.2805	0.0157

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Foilar Fungicides in Wheat.

Trial ID: 12-6B
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	TRZAW Injury Percent 7DAT	TRZAW Injury Percent 21DAT	TRZAW 4-24-12 Injury Percent 7 DA-B	TRZAW 5-1-12 Injury Percent 7 DA-C	TRZAW 5-8-12 Injury Percent 21 DA-B	TRZAW 5-15-12 Injury Percent 21 DA-C
	Pest Code														
	Crop Code														
	Rating Date											4-24-12	5-1-12	5-8-12	5-15-12
	Rating Type									Injury	Injury	Injury	Injury	Injury	Injury
	Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
	Rating Timing														
	Trt-Eval Interval									7DAT	21DAT	7 DA-B	7 DA-C	21 DA-B	21 DA-C
1	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A	0 a	0 a	0 a		0 a	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	JOINT	A						
	PZX74	2.34	SC	0.091	lb ai/a	5	fl oz/a	HEAD	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	HEAD	B						
2	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A	0 a	0 a	0 a		0 a	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	JOINT	A						
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	HEAD	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	HEAD	B						
3	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A	0 a	0 a				
	KOCIDE 3000	46.1	WG	0.346	lb ai/a	12	oz/a	JOINT	A						
	APROACH	2.08	SC	0.0488	lb ai/a	3	fl oz/a	JOINT	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	JOINT	A						
4	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A	0 a	0 a				
	APROACH	2.08	SC	0.0488	lb ai/a	3	fl oz/a	JOINT	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	JOINT	A						
5	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A	0 a	0 a		0 a		0 a
	KOCIDE 3000	46.1	WG	0.346	lb ai/a	12	oz/a	JOINT	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	JOINT	A						
	PROSARO	3.52	SC	0.179	lb ai/a	6.5	fl oz/a	FLOWER	C						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FLOWER	C						
6	NONTREATED									0 a	0 a	0 a	0 a	0 a	0 a
	LSD (P=.05)									0.0	0.0	0.0	0.0	0.0	0.0
	Standard Deviation									0.0	0.0	0.0	0.0	0.0	0.0
	CV									0.0	0.0	0.0	0.0	0.0	0.0
	Replicate F									0.000	0.000	0.000	0.000	0.000	0.000
	Replicate Prob(F)									1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
	Treatment F									0.000	0.000	0.000	0.000	0.000	0.000
	Treatment Prob(F)									1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Foilar Fungicides in Wheat.

Trial ID: 12-6B
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	DISEASE TRZAW Incidence Percent 21DAT	DISEASE TRZAW Severity Percent 21DAT	DISEASE TRZAW 5-8-12 Incidence Percent 21 DA-B	DISEASE TRZAW 5-8-12 Severity Percent 21 DA-B
1	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A	0 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	JOINT	A				
	PZX74	2.34	SC	0.091	lb ai/a	5	fl oz/a	HEAD	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	HEAD	B				
2	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A	0 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	JOINT	A				
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	HEAD	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	HEAD	B				
3	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A	0 a	0 a		
	KOCIDE 3000	46.1	WG	0.346	lb ai/a	12	oz/a	JOINT	A				
	APROACH	2.08	SC	0.0488	lb ai/a	3	fl oz/a	JOINT	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	JOINT	A				
4	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A	0 a	0 a		
	APROACH	2.08	SC	0.0488	lb ai/a	3	fl oz/a	JOINT	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	JOINT	A				
5	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A	0 a	0 a		
	KOCIDE 3000	46.1	WG	0.346	lb ai/a	12	oz/a	JOINT	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	JOINT	A				
	PROSARO	3.52	SC	0.179	lb ai/a	6.5	fl oz/a	FLOWER	C				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FLOWER	C				
6	NONTREATED									0 a	0 a	0 a	0 a
LSD (P=.05)										0.0	0.0	0.0	0.0
Standard Deviation										0.0	0.0	0.0	0.0
CV										0.0	0.0	0.0	0.0
Replicate F										0.000	0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000

Foilar Fungicides in Wheat.

Trial ID: 12-6B
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	DISEASE TRZAW 5-15-12 Incidence Percent 21 DA-C	DISEASE TRZAW 5-15-12 Severity Percent 21 DA-C	DISEASE TRZAW 5-18-12 Incidence Percent	DISEASE TRZAW 5-18-12 Severity Percent
1	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A			0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	JOINT	A				
	PZX74	2.34	SC	0.091	lb ai/a	5	fl oz/a	HEAD	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	HEAD	B				
2	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A			0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	JOINT	A				
	APROACH	2.08	SC	0.0975	lb ai/a	6	fl oz/a	HEAD	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	HEAD	B				
3	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A			0 a	0 a
	KOCIDE 3000	46.1	WG	0.346	lb ai/a	12	oz/a	JOINT	A				
	APROACH	2.08	SC	0.0488	lb ai/a	3	fl oz/a	JOINT	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	JOINT	A				
4	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A			0 a	0 a
	APROACH	2.08	SC	0.0488	lb ai/a	3	fl oz/a	JOINT	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	JOINT	A				
5	HARMONY EXTRA SG	50	SG	0.028	lb ai/a	0.9	oz/a	JOINT	A	0 a	0 a	0 a	0 a
	KOCIDE 3000	46.1	WG	0.346	lb ai/a	12	oz/a	JOINT	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	JOINT	A				
	PROSARO	3.52	SC	0.179	lb ai/a	6.5	fl oz/a	FLOWER	C				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FLOWER	C				
6	NONTREATED									0 a	0 a	0 a	0 a
LSD (P=.05)										0.0	0.0	0.0	0.0
Standard Deviation										0.0	0.0	0.0	0.0
CV										0.0	0.0	0.0	0.0
Replicate F										0.000	0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000

Southern Illinois University

Foilar Fungicides in Wheat.

Trial ID: 12-6B
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: DuPont (US 297/12/01 MWJ).
2. Ratings: CI 7 DAT, 21 DAT. DI/DS 21 DAT and just prior to senescense.
3. Application timings:
   A, JOINT = after tillered to jointing
   B, HEAD = heading before F10.5
   C, FLOWER = flowering
4. Plots were scouted throughout the growing season for leaf and head diseases with none found at any time.
5. Ratings on 5-18-12 are just prior to senescense.
6. DAT = Days after treatment.
   Ratings at 7 days after the JOINT, HEAD, and FLOWER application were on 3-27-12, 4-24-12, and 5-1-12, respectively.
   Ratings at 21 days after the JOINT, HEAD, and FLOWER applications were on 4-10-12, 5-8-12, and 5-15-12, respectively.
7. Harvested 6-6-12, 4.375 ft by 37 ft.

Southern Illinois University

Evaluation of Herbicides for Grass Control in Winter Wheat.

Trial ID: 12-ARC-13-E50
Location: Agronomy Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 10-26-11

Trial Location

City: Carbondale
State/Prov.: IL
Postal Code: 62901
Country: USA United States

Objectives:
Evaluate a program approach of Axiom followed by Osprey applied sequentially
for season-long weed control.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: TRZAW Triticum aestivum (winter) Winter wheat
Variety: P25R62
BBCH Scale: BCER **Planting Date:** 10-26-11
Planting Method: SEEDED Seeded **Rate, Unit:** 1.4 millionS/A
Depth, Unit: 1 IN
Row Spacing, Unit: 7.5 IN

Pest Description

Pest 1 Type: W **Code:** POAAN - Poa annua L.
Common Name: bluegrass, annual

Pest 2 Type: W **Code:** ALLVI - Allium vineale L.
Common Name: garlic, wild

Pest 3 Type: W **Code:** LAMAM - Lamium amplexicaule L.
Common Name: henbit

Pest 4 Type: W **Code:** RANAB - Ranunculus abortivus L.
Common Name: buttercup, smallflower

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	Fall: N 30 LB/A, P2O5 0 LB/A, K2O 0 LB/A
2.	Spring: N 85 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 2.2 **Texture:** SIL SILT LOAM
pH: 6.2 **Soil Name:** WEIR
CEC: 7.3

Additional Measured Elements

Element	Quantity	Unit
P1	63	LB/A
K	217	LB/A

Evaluation of Herbicides for Grass Control in Winter Wheat.

Trial ID: 12-ARC-13-E50
Location: Agronomy Res. Center
Investigator: Bryan Young

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Carbondale IL **Distance, Unit:** 0.5 MI

Application Description

	A	B
Application Date:	10-29-11	3-13-12
Time of Day:	11:00 am	12:00 pm
Application Method:	Spray	Spray
Application Timing:	PRE	SPRING
Application Placement:	BROFOL	BROFOL
Applied By:	NRJ	NRJ
Air Temperature, Unit:	55 F	80 F
% Relative Humidity:	33	35
Wind Velocity, Unit:	3 MPH	1 MPH
Wind Direction:	W	S
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	50 F	50 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	0	0
Next Rain Occurred On:	11-3-11	3-15-12

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	TRZAW BCER	TRZAW BCER
Stage Scale Used:	BBCH	DESC
Stage Majority, Percent:	NA	FK4
Height, Unit:	NA IN	6 IN
Height Minimum, Maximum:		3 6

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	POAAN W DESC	POAAN W DESC
Stage Majority, Percent:	2	15
Stage Minimum, Percent:	1	10
Stage Maximum, Percent:	3	20
Height, Unit:	1 IN	1.5 IN
Height Minimum, Maximum:	0.5 1	1 2
Density, Unit:	10 FT2	1 FT2
Pest 2 Code, Type, Scale:	ALLVI W DESC	ALLVI W DESC
Stage Majority, Percent:	2	2
Stage Minimum, Percent:	1	1
Stage Maximum, Percent:	3	3
Height, Unit:	3 IN	5 IN
Height Minimum, Maximum:	2 6	4 8
Density, Unit:	5 FT2	0.5 FT2
Pest 3 Code, Type, Scale:	LAMAM W DESC	LAMAM W DESC
Stage Majority, Percent:	4	15
Stage Minimum, Percent:	4	10
Stage Maximum, Percent:	6	20
Height, Unit:	1 IN	3 IN
Height Minimum, Maximum:	0.5 1	2 3
Density, Unit:	4 FT2	0.1 FT2
Pest 4 Code, Type, Scale:	RANAB W DESC	RANAB W DESC
Stage Majority, Percent:	3	8
Stage Minimum, Percent:	2	4
Stage Maximum, Percent:	5	10
Height, Unit:	1 IN	2 IN
Height Minimum, Maximum:	0.5 1	1.5 2
Density, Unit:	2 FT2	0.5 FT2

Southern Illinois University

Evaluation of Herbicides for Grass Control in Winter Wheat.

Trial ID: 12-ARC-13-E50
Location: Agronomy Res. Center
Investigator: Bryan Young

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA

Evaluation of Herbicides for Grass Control in Winter Wheat.

Trial ID: 12-ARC-13-E50
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	TRZAW 6-4-12 Moisture Percent	TRZAW 6-4-12 Test wt. lb/bu	TRZAW 6-4-12 Yield bu/A
1	NONTREATED									12.7 a	54.6 a	57 b
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	12.1 b	54.5 a	84 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A			
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	11.9 b	54.2 a	87 a
	AXIOM	68	WG	0.425	lb ai/a	10	oz/a	PRE	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A			
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	12.0 b	54.2 a	79 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A			
	OSPREY	4.5	WG	0.0134	lb ai/a	4.76	oz/a	SPRING	B			
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B			
	32% UAN	100	SL	4	pt/a	4	pt/a	SPRING	B			
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	11.9 b	54.8 a	89 a
	AXIOM	68	WG	0.425	lb ai/a	10	oz/a	PRE	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A			
	OSPREY	4.5	WG	0.0134	lb ai/a	4.76	oz/a	SPRING	B			
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B			
	32% UAN	100	SL	4	pt/a	4	pt/a	SPRING	B			
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	12.3 b	55.6 a	78 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A			
	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	SPRING	B			
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	SPRING	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPRING	B			
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	11.9 b	52.8 a	76 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A			
	POWERFLEX	7.5	WG	0.0164	lb ai/a	3.5	oz/a	SPRING	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPRING	B			
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	11.9 b	53.8 a	86 a
	ANTHEM	2.15	SE	0.111	lb ai/a	6.6	fl oz/a	PRE	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A			
LSD (P=.05)										0.40	2.36	16.8
Standard Deviation										0.27	1.60	11.4
CV										2.27	2.95	14.33
Replicate F										4.992	1.298	0.502
Replicate Prob(F)										0.0091	0.3012	0.6847
Treatment F										3.798	1.043	3.123
Treatment Prob(F)										0.0081	0.4320	0.0201

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Evaluation of Herbicides for Grass Control in Winter Wheat.

Trial ID: 12-ARC-13-E50
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	TRZAW 11-14-11 Injury Percent 7 DAE 16 DA-A	TRZAW 11-28-11 Injury Percent 21 DAE 30 DA-A	TRZAW 3-20-12 Injury Percent 7 DA-B	TRZAW 4-3-12 Injury Percent 21 DA-B
1	NONTREATED									0 a	0 a	0 a	0 a
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	0 a	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A				
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	0 a	0 a	0 a	0 a
	AXIOM	68	WG	0.425	lb ai/a	10	oz/a	PRE	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A				
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	0 a	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A				
	OSPREY	4.5	WG	0.0134	lb ai/a	4.76	oz/a	SPRING	B				
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B				
	32% UAN	100	SL	4	pt/a	4	pt/a	SPRING	B				
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	0 a	0 a	0 a	0 a
	AXIOM	68	WG	0.425	lb ai/a	10	oz/a	PRE	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A				
	OSPREY	4.5	WG	0.0134	lb ai/a	4.76	oz/a	SPRING	B				
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B				
	32% UAN	100	SL	4	pt/a	4	pt/a	SPRING	B				
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	0 a	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A				
	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	SPRING	B				
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	SPRING	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPRING	B				
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	0 a	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A				
	POWERFLEX	7.5	WG	0.0164	lb ai/a	3.5	oz/a	SPRING	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPRING	B				
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	0 a	0 a	0 a	0 a
	ANTHEM	2.15	SE	0.111	lb ai/a	6.6	fl oz/a	PRE	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A				
LSD (P=.05)										0.0	0.0	0.0	0.0
Standard Deviation										0.0	0.0	0.0	0.0
CV										0.0	0.0	0.0	0.0
Replicate F										0.000	0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000

Evaluation of Herbicides for Grass Control in Winter Wheat.

Trial ID: 12-ARC-13-E50
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	POAAN 11-28-11 Control Percent 21 DAE 30 DA-A	POAAN 3-27-12 Control Percent 14 DA-B	POAAN 4-12-12 Control Percent 30 DA-B	ALLVI 11-28-11 Control Percent 21 DAE 30 DA-A	ALLVI 3-27-12 Control Percent 14 DA-B	ALLVI 4-12-12 Control Percent 30 DA-B
1	NONTREATED									0 b	0 d	0 d	0 b	0 d	0 e
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	99 a	82 c	84 c	55 a	85 c	83 d
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A						
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	99 a	94 ab	96 a	53 a	85 bc	86 cd
	AXIOM	68	WG	0.425	lb ai/a	10	oz/a	PRE	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A						
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	99 a	94 ab	97 a	55 a	91 ab	90 bc
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A						
	OSPREY	4.5	WG	0.0134	lb ai/a	4.76	oz/a	SPRING	B						
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B						
	32% UAN	100	SL	4	pt/a	4	pt/a	SPRING	B						
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	99 a	96 a	99 a	55 a	91 a	94 b
	AXIOM	68	WG	0.425	lb ai/a	10	oz/a	PRE	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A						
	OSPREY	4.5	WG	0.0134	lb ai/a	4.76	oz/a	SPRING	B						
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B						
	32% UAN	100	SL	4	pt/a	4	pt/a	SPRING	B						
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	99 a	97 a	99 a	50 a	95 a	99 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A						
	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	SPRING	B						
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	SPRING	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPRING	B						
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	99 a	91 b	90 b	53 a	90 abc	89 c
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A						
	POWERFLEX	7.5	WG	0.0164	lb ai/a	3.5	oz/a	SPRING	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPRING	B						
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	99 a	96 a	96 a	50 a	85 bc	86 cd
	ANTHEM	2.15	SE	0.111	lb ai/a	6.6	fl oz/a	PRE	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A						
LSD (P=.05)										0.3	4.3	4.4	8.0	6.2	4.1
Standard Deviation										0.2	2.9	3.0	5.5	4.2	2.8
CV										0.2	3.6	3.61	11.8	5.45	3.52
Replicate F										1.000	1.095	0.935	0.280	1.221	3.980
Replicate Prob(F)										0.4123	0.3733	0.4411	0.8392	0.3269	0.0216
Treatment F										156703.875	514.090	511.596	47.520	223.349	541.231
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Evaluation of Herbicides for Grass Control in Winter Wheat.

Trial ID: 12-ARC-13-E50
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	LAMAM	LAMAM	LAMAM	RANAB	RANAB
Pest Code										LAMAM	LAMAM	LAMAM	RANAB	RANAB
Crop Code														
Rating Date										11-28-11	3-27-12	4-12-12	3-27-12	4-12-12
Rating Type										Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent
Rating Timing										21 DAE				
Trt-Eval Interval										30 DA-A	14 DA-B	30 DA-B	14 DA-B	30 DA-B
1	NONTREATED									0 b	0 e	0 c	0 c	0 d
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	99 a	93 d	93 b	80 b	80 c
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A					
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	98 a	94 cd	94 b	90 a	90 abc
	AXIOM	68	WG	0.425	lb ai/a	10	oz/a	PRE	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A					
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	98 a	94 bcd	98 a	96 a	97 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A					
	OSPREY	4.5	WG	0.0134	lb ai/a	4.76	oz/a	SPRING	B					
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B					
	32% UAN	100	SL	4	pt/a	4	pt/a	SPRING	B					
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	98 a	97 abc	99 a	96 a	99 a
	AXIOM	68	WG	0.425	lb ai/a	10	oz/a	PRE	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A					
	OSPREY	4.5	WG	0.0134	lb ai/a	4.76	oz/a	SPRING	B					
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B					
	32% UAN	100	SL	4	pt/a	4	pt/a	SPRING	B					
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	98 a	98 a	99 a	96 a	98 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A					
	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	SPRING	B					
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	SPRING	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPRING	B					
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	99 a	98 a	99 a	95 a	96 ab
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A					
	POWERFLEX	7.5	WG	0.0164	lb ai/a	3.5	oz/a	SPRING	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPRING	B					
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	99 a	97 ab	98 a	88 ab	87 bc
	ANTHEM	2.15	SE	0.111	lb ai/a	6.6	fl oz/a	PRE	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A					
LSD (P=.05)										1.9	3.4	2.8	9.5	10.0
Standard Deviation										1.3	2.3	1.9	6.5	6.8
CV										1.49	2.75	2.26	8.1	8.37
Replicate F										0.625	0.636	1.233	3.822	3.013
Replicate Prob(F)										0.6069	0.5999	0.3228	0.0249	0.0529
Treatment F										2933.927	867.970	1284.480	102.524	96.945
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Evaluation of Herbicides for Grass Control in Winter Wheat.

Trial ID: 12-ARC-13-E50
Location: Agronomy Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Bayer (WM1).
2. Ratimgs: CI 7 + 21 DAE and 7 + 21 DA-B.
   WC 21 DAE, 14 DA-B, 35 DA-B.
   Estimate % weed cover in nontreated by species at each evaluation.
3. Target weed annual bluegrass (POAAN).
4. Percent groundcover at evaluation:
   POAAN is 50 and 30% at 21 DAE and 14DA-B, respectively.
   ALLVI is 10 and 10% at 21 DAE and 14DA-B, respectively.
   STEME is 25 and 20% at 21 DAE and 14DA-B, respectively.
   RANAB is 20% at 14 DA-B, respectively.
5. Harvested 6-4-12, 5 ft by 27 ft.

Southern Illinois University

Metsulfuron in Wheat.

Trial ID: 12-20B-N110
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 10-12-11

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
Determine the value of low rates of metsulfuron
for weed control in winter wheat.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: TRZAW Triticum aestivum (winter) Winter wheat
Variety: P25R62
BBCH Scale: BCER **Planting Date:** 10-12-11
Planting Method: SEEDED **Rate, Unit:** 1.4 millionS/A
Depth, Unit: 1 IN
Row Spacing, Unit: 7.5 IN

Pest Description

Pest 1 Type: W **Code:** LAMAM - Lamium amplexicaule L.
Common Name: henbit

Pest 2 Type: W **Code:** CAPBP - Capsella bursa-pastoris (L.) M
Common Name: shepherdspurse

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT
Plot Area, Unit: 280 FT2 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	Fall: N 30 LB/A, P2O5 0 LB/A, K2O 0 LB/A
2.	Spring: N 85 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.8 **Texture:** SIL SILT LOAM
pH: 6.7 **Soil Name:** BETHALTO
CEC: 12

Additional Measured Elements

Element	Quantity	Unit
P1	54	LB/A
K	286	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Metsulfuron in Wheat.

Trial ID: 12-20B-N110
Location: Belleville Res. Center
Investigator: Bryan Young

Application Description

	A
Application Date:	3-14-12
Time of Day:	10:00
Application Method:	Spray
Application Timing:	2-4"W
Application Placement:	BROFOL
Applied By:	RFK
Air Temperature, Unit:	73 F
% Relative Humidity:	71
Wind Velocity, Unit:	5 MPH
Wind Direction:	S
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	42 F
Soil Moisture:	NORMAL
% Cloud Cover:	0
Next Rain Occurred On:	3-16-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	TRZAW BCER
Stage Scale Used:	DESC
Stage Majority, Percent:	F4
Stage Minimum, Percent:	F4
Stage Maximum, Percent:	F5
Height, Unit:	5 IN
Height Minimum, Maximum:	4 6

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	LAMAM W DESC
Stage Majority, Percent:	10+
Height, Unit:	4 IN
Height Minimum, Maximum:	2 5
Density, Unit:	0.1 FT2
Pest 2 Code, Type, Scale:	CAPBP W DESC
Stage Majority, Percent:	6
Stage Minimum, Percent:	5
Stage Maximum, Percent:	8
Height, Unit:	4 IN
Height Minimum, Maximum:	2 4
Density, Unit:	0.01 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	7.5 FT
Spray Volume, Unit:	15 GPA

Metsulfuron in Wheat.

Trial ID: 12-20B-N110
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	TRZAW 3-21-12 Injury Percent 7 DA-A	TRZAW 3-28-12 Injury Percent 14 DA-A	TRZAW 4-11-12 Injury Percent 28 DA-A	LAMAM 3-28-12 Control Percent 14 DA-A	LAMAM 4-11-12 Control Percent 28 DA-A	CAPBP 3-28-12 Control Percent 14 DA-A	CAPBP 4-11-12 Control Percent 28 DA-A
1	HARMONY EXTRA SG	50	SG			0.75	oz/a	2-4"W	A	0 a	0 a	0 a	90 a	99 a	90 a	99 a
	HARMONY SG	50	SG	0.01563	lb ai/a			2-4"W	A							
	EXPRESS	50	SG	.007813	lb ai/a			2-4"W	A							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A							
2	HARMONY EXTRA SG	50	SG			0.9	oz/a	2-4"W	A	0 a	0 a	0 a	90 a	99 a	90 a	99 a
	HARMONY SG	50	SG	0.01875	lb ai/a			2-4"W	A							
	EXPRESS	50	SG	.009375	lb ai/a			2-4"W	A							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A							
3	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	2-4"W	A	0 a	0 a	0 a	86 b	99 a	90 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A							
4	EXPRESS	50	SG	.009375	lb ai/a	0.3	oz/a	2-4"W	A	0 a	0 a	0 a	90 a	99 a	90 a	99 a
	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	2-4"W	A							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A							
5	HARMONY EXTRA SG	50	SG			0.75	oz/a	2-4"W	A	0 a	0 a	0 a	90 a	99 a	90 a	99 a
	HARMONY SG	50	SG	0.01563	lb ai/a			2-4"W	A							
	EXPRESS	50	SG	.007813	lb ai/a			2-4"W	A							
	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	2-4"W	A							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A							
6	HARMONY EXTRA SG	50	SG			0.9	oz/a	2-4"W	A	0 a	0 a	0 a	90 a	99 a	90 a	99 a
	HARMONY SG	50	SG	0.01875	lb ai/a			2-4"W	A							
	EXPRESS	50	SG	.009375	lb ai/a			2-4"W	A							
	ALLY XP	60	WG	0.00125	lb ai/a	0.0333	oz/a	2-4"W	A							
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A							
7	OLYMPUS FLEX	11.25	SG	0.0223	lb ai/a	3.17	oz/a	2-4"W	A	0 a	0 a	0 a	89 a	99 a	90 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	2-4"W	A							
8	NONTREATED									0 a	0 a	0 a	0 c	0 b	0 b	0 b
LSD (P=.05)										0.0	0.0	0.0	1.8	0.0	0.0	0.0
Standard Deviation										0.0	0.0	0.0	1.2	0.0	0.0	0.0
CV										0.0	0.0	0.0	1.56	0.0	0.0	0.0
Replicate F										0.000	0.000	0.000	1.400	0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000	0.2706	1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000	2683.200	0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000	0.0001	1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Metsulfuron in Wheat.

Trial ID: 12-20B-N110
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: DuPont (USA-12-224).
2. CI 5-7, 14 and 28 DAT. WC 14 and 28 DAT.
3. Apply blanket POST application for grass control as needed.
4. Not harvested.

Southern Illinois University

Broad Spectrum Grass and Broadleaf Weed Control with PowerFlex in Winter Wheat.

Trial ID: 12-20B-S110
Location: Belleville Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 10-12-11

Trial Location

City: Belleville
State/Prov.: IL
Postal Code: 62221
Country: USA

Objectives:
To evaluate the efficacy of PowerFlex and commercial standards on winter annual grasses and broadleaves in winter wheat when applied in the fall or spring in the Ohio valley.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: TRZAW Triticum aestivum (winter) Winter wheat
Variety: P25R62
BBCH Scale: BCER **Planting Date:** 10-12-11
Planting Method: SEEDED **Rate, Unit:** 1.4 millionS/A
Depth, Unit: 1 IN
Row Spacing, Unit: 7.5 IN

Pest Description

Pest 1 Type: W **Code:** LAMAM - Lamium amplexicaule L.
Common Name: henbit

Pest 2 Type: W **Code:** CAPBP - Capsella bursa-pastoris(L.)M
Common Name: shepherdspurse

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT
Plot Area, Unit: 280 FT2 **Tillage Type:** NOTILL
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	Fall: N 30 LB/A, P2O5 0 LB/A, K2O 0 LB/A
2.	Spring: N 85 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.8 **Texture:** SIL SILT LOAM
pH: 6.7 **Soil Name:** BETHALTO
CEC: 12

Additional Measured Elements

Element	Quantity	Unit
P1	54	LB/A
K	286	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 0.5 MI

Broad Spectrum Grass and Broadleaf Weed Control with PowerFlex in Winter Wheat.

Trial ID: 12-20B-S110
Location: Belleville Res. Center
Investigator: Bryan Young

Application Description

	A	B
Application Date:	11-30-11	3-13-12
Time of Day:	14:00	10:00
Application Method:	Spray	Spray
Application Timing:	FALL	SPRING
Application Placement:	BROFOL	BROFOL
Applied By:	RFK	RFK
Air Temperature, Unit:	45 F	64 F
% Relative Humidity:	50	88
Wind Velocity, Unit:	3 MPH	0 MPH
Wind Direction:	NW	S
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	42 F	60 F
Soil Moisture:	ABONOR	NORMAL
% Cloud Cover:	0	0
Next Rain Occurred On:	12-4-11	3-16-12

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	TRZAW BCER	TRZAW BCER
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	F2	F4
Stage Minimum, Percent:	F2	F4
Stage Maximum, Percent:	F3	F5
Height, Unit:	2 IN	5 IN
Height Minimum, Maximum:	2 3	4 6

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	LAMAM W DESC	LAMAM W DESC
Stage Majority, Percent:	10+	10+
Height, Unit:	1 IN	3 IN
Height Minimum, Maximum:	0 1	2 3
Density, Unit:	0.1 FT2	0.1 FT2
Pest 2 Code, Type, Scale:	CAPBP W DESC	CAPBP W DESC
Stage Majority, Percent:	10+	10+
Height, Unit:	1 IN	4 IN
Height Minimum, Maximum:	0 1	2 5
Density, Unit:	0.01 FT2	0.001 FT2

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA

Broad Spectrum Grass and Broadleaf Weed Control with PowerFlex in Winter Wheat.

Trial ID: 12-20B-S110
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	TRZAW 6-5-12 Moisture Percent	TRZAW 6-5-12 Test wt. lb/bu	TRZAW 6-5-12 Yield bu/A
1	PYROXSULAM	13.13	WG	0.0164	lb ai/a	2	oz/a	FALL	A	13.2 a	57.8 a	67 a
	ACTIVATOR 90	100	SL	0.5	% v/v	0.5	% v/v	FALL	A			
	AMS	100	SG	1.52	lb/a	1.52	lb/a	FALL	A			
2	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	A	13.1 a	57.8 a	66 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	FALL	A			
	AMS	100	SG	1.52	lb/a	1.52	lb/a	FALL	A			
3	OLYMPUS FLEX	11.25	SG	0.0223	lb ai/a	3.17	oz/a	FALL	A	13.3 a	57.7 a	67 a
	ACTIVATOR 90	100	SL	0.5	% v/v	0.5	% v/v	FALL	A			
	AMS	100	SG	1.52	lb/a	1.52	lb/a	FALL	A			
4	FINESSE	75	WG	0.0188	lb ai/a	0.4	oz/a	FALL	A	13.1 a	57.8 a	67 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	FALL	A			
5	PYROXSULAM	13.13	WG	0.0164	lb ai/a	2	oz/a	SPRING	B	13.2 a	57.8 a	62 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B			
	AMS	100	SG	1.52	lb/a	1.52	lb/a	SPRING	B			
6	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	SPRING	B	13.1 a	57.8 a	64 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B			
	AMS	100	SG	1.52	lb/a	1.52	lb/a	SPRING	B			
7	OLYMPUS FLEX	11.25	SG	0.0223	lb ai/a	3.17	oz/a	SPRING	B	13.3 a	57.7 a	66 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B			
	AMS	100	SG	1.52	lb/a	1.52	lb/a	SPRING	B			
8	FINESSE	75	WG	0.0188	lb ai/a	0.4	oz/a	SPRING	B	13.1 a	57.8 a	64 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B			
9	NONTREATED									13.3 a	57.7 a	63 a
LSD (P=.05)										0.26	0.15	5.5
Standard Deviation										0.18	0.10	3.8
CV										1.38	0.18	5.81
Replicate F										2.790	4.584	0.952
Replicate Prob(F)										0.0623	0.0113	0.4314
Treatment F										0.884	1.416	0.973
Treatment Prob(F)										0.5443	0.2401	0.4800

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Broad Spectrum Grass and Broadleaf Weed Control with PowerFlex in Winter Wheat.

Trial ID: 12-20B-S110
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	TRZAW 12-3-11 Injury Percent 3 DA-A	TRZAW 12-7-11 Injury Percent 7 DA-A	TRZAW 12-14-11 Injury Percent 14 DA-A	TRZAW 12-28-11 Injury Percent 28 DA-A
1	PYROXSULAM	13.13	WG	0.0164	lb ai/a	2	oz/a	FALL	A	0 a	0 a	0 a	0 a
	ACTIVATOR 90	100	SL	0.5	% v/v	0.5	% v/v	FALL	A				
	AMS	100	SG	1.52	lb/a	1.52	lb/a	FALL	A				
2	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	A	0 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	FALL	A				
	AMS	100	SG	1.52	lb/a	1.52	lb/a	FALL	A				
3	OLYMPUS FLEX	11.25	SG	0.0223	lb ai/a	3.17	oz/a	FALL	A	0 a	0 a	0 a	0 a
	ACTIVATOR 90	100	SL	0.5	% v/v	0.5	% v/v	FALL	A				
	AMS	100	SG	1.52	lb/a	1.52	lb/a	FALL	A				
4	FINESSE	75	WG	0.0188	lb ai/a	0.4	oz/a	FALL	A	0 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	FALL	A				
5	PYROXSULAM	13.13	WG	0.0164	lb ai/a	2	oz/a	SPRING	B				
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B				
	AMS	100	SG	1.52	lb/a	1.52	lb/a	SPRING	B				
6	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	SPRING	B				
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B				
	AMS	100	SG	1.52	lb/a	1.52	lb/a	SPRING	B				
7	OLYMPUS FLEX	11.25	SG	0.0223	lb ai/a	3.17	oz/a	SPRING	B				
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B				
	AMS	100	SG	1.52	lb/a	1.52	lb/a	SPRING	B				
8	FINESSE	75	WG	0.0188	lb ai/a	0.4	oz/a	SPRING	B				
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B				
9	NONTREATED									0 a	0 a	0 a	0 a
LSD (P=.05)										0.0	0.0	0.0	0.0
Standard Deviation										0.0	0.0	0.0	0.0
CV										0.0	0.0	0.0	0.0
Replicate F										0.000	0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000

Broad Spectrum Grass and Broadleaf Weed Control with PowerFlex in Winter Wheat.

Trial ID: 12-20B-S110
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	TRZAW 3-16-12 Injury Percent 3 DA-B	TRZAW 3-20-12 Injury Percent 7 DA-B	TRZAW 3-20-12 Injury Percent 14 DA GU	TRZAW 3-27-12 Injury Percent 14 DA-B	TRZAW 4-10-12 Injury Percent 28 DA-B	TRZAW 4-24-12 Injury Percent 42 DA-B
1	PYROXSULAM	13.13	WG	0.0164	lb ai/a	2	oz/a	FALL	A			0 a	0 a	0 a	0 a
	ACTIVATOR 90	100	SL	0.5	% v/v	0.5	% v/v	FALL	A						
	AMS	100	SG	1.52	lb/a	1.52	lb/a	FALL	A						
2	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	A			0 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	FALL	A						
	AMS	100	SG	1.52	lb/a	1.52	lb/a	FALL	A						
3	OLYMPUS FLEX	11.25	SG	0.0223	lb ai/a	3.17	oz/a	FALL	A			0 a	0 a	0 a	0 a
	ACTIVATOR 90	100	SL	0.5	% v/v	0.5	% v/v	FALL	A						
	AMS	100	SG	1.52	lb/a	1.52	lb/a	FALL	A						
4	FINESSE	75	WG	0.0188	lb ai/a	0.4	oz/a	FALL	A			0 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	FALL	A						
5	PYROXSULAM	13.13	WG	0.0164	lb ai/a	2	oz/a	SPRING	B	0 a	8 a		0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B						
	AMS	100	SG	1.52	lb/a	1.52	lb/a	SPRING	B						
6	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	SPRING	B	0 a	0 b		0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B						
	AMS	100	SG	1.52	lb/a	1.52	lb/a	SPRING	B						
7	OLYMPUS FLEX	11.25	SG	0.0223	lb ai/a	3.17	oz/a	SPRING	B	0 a	9 a		0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B						
	AMS	100	SG	1.52	lb/a	1.52	lb/a	SPRING	B						
8	FINESSE	75	WG	0.0188	lb ai/a	0.4	oz/a	SPRING	B	0 a	0 b		0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B						
9	NONTREATED									0 a	0 b	0 a	0 a	0 a	0 a
LSD (P=.05)										0.0	2.8	0.0	0.0	0.0	0.0
Standard Deviation										0.0	1.8	0.0	0.0	0.0	0.0
CV										0.0	56.18	0.0	0.0	0.0	0.0
Replicate F										0.000	0.375	0.000	0.000	0.000	0.000
Replicate Prob(F)										1.0000	0.7727	1.0000	1.0000	1.0000	1.0000
Treatment F										0.000	24.000	0.000	0.000	0.000	0.000
Treatment Prob(F)										1.0000	0.0001	1.0000	1.0000	1.0000	1.0000

Broad Spectrum Grass and Broadleaf Weed Control with PowerFlex in Winter Wheat.

Trial ID: 12-20B-S110
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	TRZAW 4-24-12 HEADINJ Percent 42 DA-B	TRZAW 4-24-12 MATDEL Percent 42 DA-B	TRZAW 5-25-12 MATDEL Percent
	Pest Code											
	Crop Code									TRZAW	TRZAW	TRZAW
	Rating Date									4-24-12	4-24-12	5-25-12
	Rating Type									HEADINJ	MATDEL	MATDEL
	Rating Unit									Percent	Percent	Percent
	Rating Timing											
	Trt-Eval Interval									42 DA-B	42 DA-B	
1	PYROXSULAM	13.13	WG	0.0164	lb ai/a	2	oz/a	FALL	A	0 a	0 a	0 a
	ACTIVATOR 90	100	SL	0.5	% v/v	0.5	% v/v	FALL	A			
	AMS	100	SG	1.52	lb/a	1.52	lb/a	FALL	A			
2	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	A	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	FALL	A			
	AMS	100	SG	1.52	lb/a	1.52	lb/a	FALL	A			
3	OLYMPUS FLEX	11.25	SG	0.0223	lb ai/a	3.17	oz/a	FALL	A	0 a	0 a	0 a
	ACTIVATOR 90	100	SL	0.5	% v/v	0.5	% v/v	FALL	A			
	AMS	100	SG	1.52	lb/a	1.52	lb/a	FALL	A			
4	FINESSE	75	WG	0.0188	lb ai/a	0.4	oz/a	FALL	A	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	FALL	A			
5	PYROXSULAM	13.13	WG	0.0164	lb ai/a	2	oz/a	SPRING	B	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B			
	AMS	100	SG	1.52	lb/a	1.52	lb/a	SPRING	B			
6	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	SPRING	B	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B			
	AMS	100	SG	1.52	lb/a	1.52	lb/a	SPRING	B			
7	OLYMPUS FLEX	11.25	SG	0.0223	lb ai/a	3.17	oz/a	SPRING	B	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B			
	AMS	100	SG	1.52	lb/a	1.52	lb/a	SPRING	B			
8	FINESSE	75	WG	0.0188	lb ai/a	0.4	oz/a	SPRING	B	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B			
9	NONTREATED									0 a	0 a	0 a
	LSD (P=.05)									0.0	0.0	0.0
	Standard Deviation									0.0	0.0	0.0
	CV									0.0	0.0	0.0
	Replicate F									0.000	0.000	0.000
	Replicate Prob(F)									1.0000	1.0000	1.0000
	Treatment F									0.000	0.000	0.000
	Treatment Prob(F)									1.0000	1.0000	1.0000

Broad Spectrum Grass and Broadleaf Weed Control with PowerFlex in Winter Wheat.

Trial ID: 12-20B-S110
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	LAMAM	LAMAM	LAMAM	LAMAM	LAMAM
	Pest Code									LAMAM	LAMAM	LAMAM	LAMAM	LAMAM
	Crop Code													
	Rating Date									12-14-11	12-28-11	3-27-12	4-10-12	4-24-12
	Rating Type									Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent
	Rating Timing													
	Trt-Eval Interval									14 DA-A	28 DA-A	14 DA-B	28 DA-B	42 DA-B
1	PYROXSULAM	13.13	WG	0.0164	lb ai/a	2	oz/a	FALL	A	48 a	75 a	98 a	99 a	99 a
	ACTIVATOR 90	100	SL	0.5	% v/v	0.5	% v/v	FALL	A					
	AMS	100	SG	1.52	lb/a	1.52	lb/a	FALL	A					
2	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	A	50 a	75 a	99 a	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	FALL	A					
	AMS	100	SG	1.52	lb/a	1.52	lb/a	FALL	A					
3	OLYMPUS FLEX	11.25	SG	0.0223	lb ai/a	3.17	oz/a	FALL	A	48 a	75 a	86 bc	99 a	99 a
	ACTIVATOR 90	100	SL	0.5	% v/v	0.5	% v/v	FALL	A					
	AMS	100	SG	1.52	lb/a	1.52	lb/a	FALL	A					
4	FINESSE	75	WG	0.0188	lb ai/a	0.4	oz/a	FALL	A	48 a	75 a	99 a	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	FALL	A					
5	PYROXSULAM	13.13	WG	0.0164	lb ai/a	2	oz/a	SPRING	B			90 b	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B					
	AMS	100	SG	1.52	lb/a	1.52	lb/a	SPRING	B					
6	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	SPRING	B			90 b	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B					
	AMS	100	SG	1.52	lb/a	1.52	lb/a	SPRING	B					
7	OLYMPUS FLEX	11.25	SG	0.0223	lb ai/a	3.17	oz/a	SPRING	B			90 b	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B					
	AMS	100	SG	1.52	lb/a	1.52	lb/a	SPRING	B					
8	FINESSE	75	WG	0.0188	lb ai/a	0.4	oz/a	SPRING	B			85 c	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B					
9	NONTREATED									0 b	0 b	0 d	0 b	0 b
	LSD (P=.05)									5.8	0.0	4.6	0.0	0.0
	Standard Deviation									3.8	0.0	3.1	0.0	0.0
	CV									9.78	0.0	3.81	0.0	0.0
	Replicate F									1.294	0.000	1.598	0.000	0.000
	Replicate Prob(F)									0.3213	1.0000	0.2159	1.0000	1.0000
	Treatment F									131.118	0.000	398.821	0.000	0.000
	Treatment Prob(F)									0.0001	1.0000	0.0001	1.0000	1.0000

Broad Spectrum Grass and Broadleaf Weed Control with PowerFlex in Winter Wheat.

Trial ID: 12-20B-S110
Location: Belleville Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	CAPBP	CAPBP	CAPBP	CAPBP	CAPBP
	Pest Code									CAPBP	CAPBP	CAPBP	CAPBP	CAPBP
	Crop Code													
	Rating Date									12-14-11	12-28-11	3-27-12	4-10-12	4-24-12
	Rating Type									Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent
	Rating Timing													
	Trt-Eval Interval									14 DA-A	28 DA-A	14 DA-B	28 DA-B	42 DA-B
1	PYROXSULAM	13.13	WG	0.0164	lb ai/a	2	oz/a	FALL	A	50 a	75 a	99 a	99 a	99 a
	ACTIVATOR 90	100	SL	0.5	% v/v	0.5	% v/v	FALL	A					
	AMS	100	SG	1.52	lb/a	1.52	lb/a	FALL	A					
2	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	A	50 a	75 a	99 a	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	FALL	A					
	AMS	100	SG	1.52	lb/a	1.52	lb/a	FALL	A					
3	OLYMPUS FLEX	11.25	SG	0.0223	lb ai/a	3.17	oz/a	FALL	A	50 a	75 a	99 a	99 a	99 a
	ACTIVATOR 90	100	SL	0.5	% v/v	0.5	% v/v	FALL	A					
	AMS	100	SG	1.52	lb/a	1.52	lb/a	FALL	A					
4	FINESSE	75	WG	0.0188	lb ai/a	0.4	oz/a	FALL	A	50 a	75 a	99 a	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	FALL	A					
5	PYROXSULAM	13.13	WG	0.0164	lb ai/a	2	oz/a	SPRING	B			90 b	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B					
	AMS	100	SG	1.52	lb/a	1.52	lb/a	SPRING	B					
6	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	SPRING	B			90 b	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B					
	AMS	100	SG	1.52	lb/a	1.52	lb/a	SPRING	B					
7	OLYMPUS FLEX	11.25	SG	0.0223	lb ai/a	3.17	oz/a	SPRING	B			90 b	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B					
	AMS	100	SG	1.52	lb/a	1.52	lb/a	SPRING	B					
8	FINESSE	75	WG	0.0188	lb ai/a	0.4	oz/a	SPRING	B			88 c	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	SPRING	B					
9	NONTREATED									0 b	0 b	0 d	0 b	0 b
	LSD (P=.05)									0.0	0.0	1.4	0.0	0.0
	Standard Deviation									0.0	0.0	1.0	0.0	0.0
	CV									0.0	0.0	1.15	0.0	0.0
	Replicate F									0.000	0.000	1.000	0.000	0.000
	Replicate Prob(F)									1.0000	1.0000	0.4098	1.0000	1.0000
	Treatment F									0.000	0.000	4360.800	0.000	0.000
	Treatment Prob(F)									1.0000	1.0000	0.0001	1.0000	1.0000

Southern Illinois University

Broad Spectrum Grass and Broadleaf Weed Control with PowerFlex in Winter Wheat.

Trial ID: 12-20B-S110
Location: Belleville Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Dow (PowerflexHL).
2. Ratings: CI/Growth Inhibition/Chlorosis 3 DA-A, 1,2,4 WA-A, 2 weeks after spring green-up, 3 DA-B, 1, 2, 4, and 6 WA-B, malformation and/or reduction in head size or fill, delayed maturity. WC 2 and 4 WA-A and rate all plots 2, 4, and 6 WA-B.
3. Yield.
4. Application timings: FALL and SPRING applications should be timed similar to commercial applications and be when weeds are less than 2 inch height or rosettes.
5. 14 DA GU = 14 days after spring greenup.
   Crop injury on 3-20-12 at 14 days after spring greenup was height reduction only.
   HEADINJ = Head injury including malformation, size reduction and fill.
   MATDEL = Delayed maturity.
6. Harvested 6-5-12, 4.375 ft by 25 ft.

Broadleaf Weed Control in Winter Wheat - Marestail

Trial ID: 12-ARC-25-S60
Location: Agronomy Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 10-26-11

Trial Location

City: Carbondale
State/Prov.: IL
Postal Code: 62901
Country: USA

Objectives:

Determine the appropriate tank-mix partner for applications of Harmony Extra for control of marestail.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: TRZAW Triticum aestivum (winter) Winter wheat
Variety: P25R62
BBCH Scale: BCER **Planting Date:** 10-26-11
Planting Method: SEEDED **Rate, Unit:** 1.3 millionS/A
Depth, Unit: 1 IN
Row Spacing, Unit: 7.5 IN

Pest Description

Pest 1 Type: W **Code:** ERICA - Conyza canadensis (L.) Crong.
Common Name: horseweed
Description: glyphosate-resistant marestail

Pest 2 Type: W **Code:** ALLVI - Allium vineale L.
Common Name: garlic, wild

Pest 3 Type: W **Code:** LAMPU - Lamium purpureum L.
Common Name: deadnettle, purple

Pest 4 Type: W **Code:** CERVU - Cerastium vulgatum L.
Common Name: chickweed, mouseear

Pest 5 Type: W **Code:** ALOCA - Alopecurus carolinianus Walt.
Common Name: foxtail, Carolina

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	Fall: N 30 LB/A, P2O5 0 LB/A, K2O 0 LB/A
2.	Spring: N 85 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Carbondale IL **Distance, Unit:** 0.5 MI

Southern Illinois University

Broadleaf Weed Control in Winter Wheat - Marestail

Trial ID: 12-ARC-25-S60
Location: Agronomy Res. Center
Investigator: Bryan Young

Application Description

	A	B	C
Application Date:	10-29-11	12-2-11	3-13-12
Time of Day:	12:00	15:30	12:00
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	FALL	SPRING
Application Placement:	BROSOI	BROFOL	BROFOL
Applied By:	NRJ	NRJ	NRJ
Air Temperature, Unit:	56 F	53 F	80 F
% Relative Humidity:	33	56	36
Wind Velocity, Unit:	2 MPH	1 MPH	1 MPH
Wind Direction:	W	NE	S
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	50 F	46 F	50 F
Soil Moisture:	NORMAL	ABONOR	NORMAL
% Cloud Cover:	0	10	0

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	TRZAW BCER	TRZAW BCER	TRZAW BCER
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	FK1	FK4
Stage Minimum, Percent:		2-3 LEAF	
Height, Unit:	NA IN	4 IN	6 IN
Height Minimum, Maximum:		3 4	3 6

Broadleaf Weed Control in Winter Wheat - Marestail

Trial ID: 12-ARC-25-S60
Location: Agronomy Res. Center
Investigator: Bryan Young

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	ERICA W DESC	ERICA W DESC	ERICA W DESC
Stage Majority, Percent:	4	8	6
Stage Minimum, Percent:	2	4	4
Stage Maximum, Percent:	8	15	8
Height, Unit:	0.75 IN	0.75 IN	1 IN
Height Minimum, Maximum:	0.5 1	0.5 1	1 2
Density, Unit:	2 FT2	2 FT2	0.1 FT2
Pest 2 Code, Type, Scale:	ALLVI W DESC	ALLVI W DESC	ALLVI W DESC
Stage Majority, Percent:	2	2	2
Stage Minimum, Percent:	1	1	1
Stage Maximum, Percent:	3	3	3
Height, Unit:	4 IN	4 IN	6 IN
Height Minimum, Maximum:	2 6	2 6	3 8
Density, Unit:	4 FT2	4 FT2	4 FT2
Pest 3 Code, Type, Scale:	LAMPU W DESC	LAMPU W DESC	LAMPU W DESC
Stage Majority, Percent:	4	6	15
Stage Minimum, Percent:	2	4	10
Stage Maximum, Percent:	6	10	20
Height, Unit:	0.5 IN	1 IN	3 IN
Height Minimum, Maximum:	0.5 1	0.5 1.5	2 4
Density, Unit:	2 FT2	2 FT2	0.5 FT2
Pest 4 Code, Type, Scale:	CERVU W DESC	CERVU W DESC	CERVU W DESC
Stage Majority, Percent:	4	6	20
Stage Minimum, Percent:	2	4	15
Stage Maximum, Percent:	6	10	25
Height, Unit:	0.5 IN	1 IN	3 IN
Height Minimum, Maximum:	0.5 1	0.5 1.5	2 4
Density, Unit:	2 FT2	2 FT2	3 FT2
Pest 5 Code, Type, Scale:	ALOCA W DESC	ALOCA W DESC	ALOCA W DESC
Stage Majority, Percent:	4	8	10
Stage Minimum, Percent:	2	4	8
Stage Maximum, Percent:	6	10	12
Height, Unit:	1 IN	1 IN	3 IN
Height Minimum, Maximum:	0.5 1.5	1 2	2 4
Density, Unit:	5 FT2	5 FT2	5 FT2

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Broadleaf Weed Control in Winter Wheat - Marestail

Trial ID: 12-ARC-25-S60
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	TRZAW 12-9-11 Injury Percent 7 DA-B	TRZAW 12-16-11 Injury Percent 14 DA-B	TRZAW 12-30-11 Injury Percent 28 DA-B	TRZAW 3-13-12 Injury Percent 0 DA-C	TRZAW 3-20-12 Injury Percent 7 DA-C	TRZAW 3-27-12 Injury Percent 14 DA-C	TRZAW 4-10-12 Injury Percent 28 DA-C
1	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	0 a	0 a	0 a	0 a			0 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B							
2	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	0 a	0 a	0 a	0 a			0 a
	SENCOR	75 WG		0.094	lb ai/a	2	oz/a	FALL	B							
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B							
3	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	0 a	0 a	0 a	0 a			0 a
	SENCOR	75 WG		0.14	lb ai/a	3	oz/a	FALL	B							
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B							
4	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	0 a	0 a	0 a	0 a			0 a
	SENCOR	75 WG		0.188	lb ai/a	4	oz/a	FALL	B							
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B							
5	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	0 a	0 a	0 a	0 a			0 a
	CLARITY	4 SL		0.0625	lb ae/a	2	fl oz/a	FALL	B							
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B							
6	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	0 a	0 a	0 a	0 a			0 a
	CLARITY	4 SL		0.125	lb ae/a	4	fl oz/a	FALL	B							
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B							
7	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	0 a	0 a	0 a	0 a	0 a	0 a	0 a
	SENCOR	75 WG		0.094	lb ai/a	2	oz/a	FALL	B							
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B							
	SENCOR	75 WG		0.094	lb ai/a	2	oz/a	SPRING	C							
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C							
8	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	SPRING	C					0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C							
9	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	SPRING	C					0 a	0 a	0 a
	SENCOR	75 WG		0.094	lb ai/a	2	oz/a	SPRING	C							
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C							
10	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	SPRING	C					0 a	0 a	0 a
	SENCOR	75 WG		0.14	lb ai/a	3	oz/a	SPRING	C							
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C							
11	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	SPRING	C					0 a	0 a	0 a
	SENCOR	75 WG		0.188	lb ai/a	4	oz/a	SPRING	C							
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C							
12	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	SPRING	C					0 a	0 a	0 a
	CLARITY	4 SL		0.0625	lb ae/a	2	fl oz/a	SPRING	C							
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C							
13	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	SPRING	C					0 a	0 a	0 a
	CLARITY	4 SL		0.125	lb ae/a	4	fl oz/a	SPRING	C							
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C							
14	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	SPRING	C					0 a	0 a	0 a
	2,4-D LV 4	3.8 EC		0.475	lb ae/a	1	pt/a	SPRING	C							
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C							
15	NONTREATED									0 a	0 a	0 a	0 a	0 a	0 a	0 a

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Broadleaf Weed Control in Winter Wheat - Marestail

Trial ID: 12-ARC-25-S60
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code							
Pest Code																
Crop Code										TRZAW	TRZAW	TRZAW	TRZAW	TRZAW	TRZAW	TRZAW
Rating Date										12-9-11	12-16-11	12-30-11	3-13-12	3-20-12	3-27-12	4-10-12
Rating Type										Injury	Injury	Injury	Injury	Injury	Injury	Injury
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing																
Trt-Eval Interval										7 DA-B	14 DA-B	28 DA-B	0 DA-C	7 DA-C	14 DA-C	28 DA-C
16	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	0 a	0 a	0 a	0 a			0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A							
LSD (P=.05)										0.0	0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation										0.0	0.0	0.0	0.0	0.0	0.0	0.0
CV										0.0	0.0	0.0	0.0	0.0	0.0	0.0
Replicate F										0.000	0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Broadleaf Weed Control in Winter Wheat - Marestail

Trial ID: 12-ARC-25-S60
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR 12-30-11 Control Percent 28 DA-B	ERICA-HR 3-13-12 Control Percent 0 DA-C	ERICA-HR 4-10-12 Control Percent 28 DA-C
1	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	B	53 b	83 a	33 d
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B			
2	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	B	50 b	83 a	57 c
	SENCOR	75	WG	0.094	lb ai/a	2	oz/a	FALL	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B			
3	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	B	47 b	90 a	85 ab
	SENCOR	75	WG	0.14	lb ai/a	3	oz/a	FALL	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B			
4	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	B	47 b	93 a	95 a
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	FALL	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B			
5	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	B	47 b	87 a	90 a
	CLARITY	4	SL	0.0625	lb ae/a	2	fl oz/a	FALL	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B			
6	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	B	53 b	92 a	73 b
	CLARITY	4	SL	0.125	lb ae/a	4	fl oz/a	FALL	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B			
7	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	B	47 b	85 a	85 ab
	SENCOR	75	WG	0.094	lb ai/a	2	oz/a	FALL	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B			
	SENCOR	75	WG	0.094	lb ai/a	2	oz/a	SPRING	C			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPRING	C			
8	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	SPRING	C			80 ab
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPRING	C			
9	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	SPRING	C			91 a
	SENCOR	75	WG	0.094	lb ai/a	2	oz/a	SPRING	C			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPRING	C			
10	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	SPRING	C			84 ab
	SENCOR	75	WG	0.14	lb ai/a	3	oz/a	SPRING	C			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPRING	C			
11	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	SPRING	C			91 a
	SENCOR	75	WG	0.188	lb ai/a	4	oz/a	SPRING	C			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPRING	C			
12	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	SPRING	C			96 a
	CLARITY	4	SL	0.0625	lb ae/a	2	fl oz/a	SPRING	C			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPRING	C			
13	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	SPRING	C			92 a
	CLARITY	4	SL	0.125	lb ae/a	4	fl oz/a	SPRING	C			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPRING	C			
14	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	SPRING	C			92 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	SPRING	C			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	SPRING	C			
15	NONTREATED									0 c	0 b	0 e

Broadleaf Weed Control in Winter Wheat - Marestail

Trial ID: 12-ARC-25-S60
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR	ERICA-HR	ERICA-HR
	Pest Code									ERICA-HR	ERICA-HR	ERICA-HR
	Crop Code											
	Rating Date									12-30-11	3-13-12	4-10-12
	Rating Type									Control	Control	Control
	Rating Unit									Percent	Percent	Percent
	Rating Timing											
	Trt-Eval Interval									28 DA-B	0 DA-C	28 DA-C
16	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	99 a	92 a	73 b
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A			
	LSD (P=.05)									7.5	14.1	16.4
	Standard Deviation									4.4	8.1	9.9
	CV									8.86	10.4	12.93
	Replicate F									2.537	2.555	0.903
	Replicate Prob(F)									0.1104	0.1089	0.4160
	Treatment F									98.013	39.675	21.026
	Treatment Prob(F)									0.0001	0.0001	0.0001

Broadleaf Weed Control in Winter Wheat - Marestail

Trial ID: 12-ARC-25-S60
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ALLVI 12-30-11 Control Percent 28 DA-B	ALLVI 3-13-12 Control Percent 0 DA-C	ALLVI 4-10-12 Control Percent 28 DA-C	LAMPU 12-30-11 Control Percent 28 DA-B	LAMPU 3-13-12 Control Percent 0 DA-C	LAMPU 4-10-12 Control Percent 28 DA-C
1	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	23 de	90 a	90 a	47 b	90 ab	98 ab
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B						
2	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	27 d	83 ab	88 a	43 bc	88 abc	99 a
	SENCOR	75 WG		0.094	lb ai/a	2	oz/a	FALL	B						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B						
3	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	23 de	92 a	90 a	33 bc	92 ab	98 ab
	SENCOR	75 WG		0.14	lb ai/a	3	oz/a	FALL	B						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B						
4	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	20 de	90 a	90 a	30 c	90 ab	98 ab
	SENCOR	75 WG		0.188	lb ai/a	4	oz/a	FALL	B						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B						
5	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	40 c	88 a	90 a	43 bc	83 bc	99 a
	CLARITY	4 SL		0.0625	lb ae/a	2	fl oz/a	FALL	B						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B						
6	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	62 b	90 a	90 a	47 b	78 c	98 ab
	CLARITY	4 SL		0.125	lb ae/a	4	fl oz/a	FALL	B						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B						
7	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	13 e	85 a	87 a	37 bc	98 a	99 a
	SENCOR	75 WG		0.094	lb ai/a	2	oz/a	FALL	B						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B						
	SENCOR	75 WG		0.094	lb ai/a	2	oz/a	SPRING	C						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C						
8	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	SPRING	C			90 a			85 c
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C						
9	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	SPRING	C			88 a			98 ab
	SENCOR	75 WG		0.094	lb ai/a	2	oz/a	SPRING	C						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C						
10	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	SPRING	C			88 a			99 a
	SENCOR	75 WG		0.14	lb ai/a	3	oz/a	SPRING	C						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C						
11	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	SPRING	C			88 a			97 ab
	SENCOR	75 WG		0.188	lb ai/a	4	oz/a	SPRING	C						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C						
12	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	SPRING	C			88 a			92 abc
	CLARITY	4 SL		0.0625	lb ae/a	2	fl oz/a	SPRING	C						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C						
13	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	SPRING	C			90 a			98 ab
	CLARITY	4 SL		0.125	lb ae/a	4	fl oz/a	SPRING	C						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C						
14	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	SPRING	C			90 a			97 ab
	2,4-D LV 4	3.8 EC		0.475	lb ae/a	1	pt/a	SPRING	C						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C						
15	NONTREATED									0 f	0 c	0 b	0 d	0 d	0 d

Broadleaf Weed Control in Winter Wheat - Marestail

Trial ID: 12-ARC-25-S60
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
Pest Code										ALLVI	ALLVI	ALLVI	LAMPU	LAMPU	LAMPU
Crop Code															
Rating Date										12-30-11	3-13-12	4-10-12	12-30-11	3-13-12	4-10-12
Rating Type										Control	Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing															
Trt-Eval Interval										28 DA-B	0 DA-C	28 DA-C	28 DA-B	0 DA-C	28 DA-C
16	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	80 a	75 b	87 a	97 a	82 bc	88 bc
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A						
LSD (P=.05)										12.6	9.5	3.7	15.6	11.3	10.0
Standard Deviation										7.3	5.5	2.2	9.0	6.5	6.0
CV										22.73	7.12	2.63	21.54	8.4	6.68
Replicate F										6.934	1.138	2.266	3.277	0.906	1.273
Replicate Prob(F)										0.0068	0.3449	0.1212	0.0642	0.4240	0.2946
Treatment F										34.969	85.831	308.597	23.291	62.215	49.189
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Broadleaf Weed Control in Winter Wheat - Marestail

Trial ID: 12-ARC-25-S60
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	CERVU 12-30-11 Control Percent 28 DA-B	CERVU 3-13-12 Control Percent 0 DA-C	CERVU 4-10-12 Control Percent 28 DA-C	ALOCA 12-30-11 Control Percent 28 DA-B	ALOCA 3-13-12 Control Percent 0 DA-C	ALOCA 4-10-12 Control Percent 28 DA-C
1	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	60 b	99 a	99 a	0 d	0 b	0 b
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B						
2	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	60 b	97 a	99 a	10 cd	3 b	0 b
	SENCOR	75 WG		0.094	lb ai/a	2	oz/a	FALL	B						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B						
3	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	63 b	99 a	99 a	43 b	3 b	0 b
	SENCOR	75 WG		0.14	lb ai/a	3	oz/a	FALL	B						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B						
4	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	63 b	99 a	99 a	40 b	0 b	0 b
	SENCOR	75 WG		0.188	lb ai/a	4	oz/a	FALL	B						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B						
5	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	53 b	98 a	99 a	3 d	0 b	0 b
	CLARITY	4 SL		0.0625	lb ae/a	2	fl oz/a	FALL	B						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B						
6	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	57 b	95 a	99 a	13 cd	0 b	0 b
	CLARITY	4 SL		0.125	lb ae/a	4	fl oz/a	FALL	B						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B						
7	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	60 b	99 a	99 a	27 bc	7 b	0 b
	SENCOR	75 WG		0.094	lb ai/a	2	oz/a	FALL	B						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B						
	SENCOR	75 WG		0.094	lb ai/a	2	oz/a	SPRING	C						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C						
8	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	SPRING	C			98 a			0 b
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C						
9	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	SPRING	C			99 a			0 b
	SENCOR	75 WG		0.094	lb ai/a	2	oz/a	SPRING	C						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C						
10	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	SPRING	C			99 a			0 b
	SENCOR	75 WG		0.14	lb ai/a	3	oz/a	SPRING	C						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C						
11	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	SPRING	C			99 a			0 b
	SENCOR	75 WG		0.188	lb ai/a	4	oz/a	SPRING	C						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C						
12	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	SPRING	C			99 a			0 b
	CLARITY	4 SL		0.0625	lb ae/a	2	fl oz/a	SPRING	C						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C						
13	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	SPRING	C			99 a			0 b
	CLARITY	4 SL		0.125	lb ae/a	4	fl oz/a	SPRING	C						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C						
14	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	SPRING	C			99 a			0 b
	2,4-D LV 4	3.8 EC		0.475	lb ae/a	1	pt/a	SPRING	C						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	SPRING	C						
15	NONTREATED									0 c	0 c	0 c	0 d	0 b	0 b

Broadleaf Weed Control in Winter Wheat - Marestail

Trial ID: 12-ARC-25-S60
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	CERVU	CERVU	CERVU	ALOCA	ALOCA	ALOCA
Pest Code										CERVU	CERVU	CERVU	ALOCA	ALOCA	ALOCA
Crop Code															
Rating Date										12-30-11	3-13-12	4-10-12	12-30-11	3-13-12	4-10-12
Rating Type										Control	Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing															
Trt-Eval Interval										28 DA-B	0 DA-C	28 DA-C	28 DA-B	0 DA-C	28 DA-C
16	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	82 a	60 b	85 b	99 a	63 a	63 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A						
LSD (P=.05)										16.3	6.1	6.1	19.1	8.3	2.4
Standard Deviation										9.4	3.5	3.7	11.0	4.8	1.4
CV										16.98	4.27	4.0	42.14	56.48	36.46
Replicate F										0.953	1.784	1.005	2.951	2.080	1.000
Replicate Prob(F)										0.4065	0.1997	0.3781	0.0811	0.1574	0.3798
Treatment F										16.770	269.123	136.068	24.971	55.480	361.000
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Broadleaf Weed Control in Winter Wheat - Marestail

Trial ID: 12-ARC-25-S60
Location: Agronomy Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: DuPont (USA-12-202).
2. Ratings: CI 7, 14, and 28 DA-B and DA-C.
   WC 28 DA-B, 0 DA-C, 28 DA-C.
3. Application timings,
   FALL = 2-3 leaf wheat and 2 inch max weed size.
   SPRING = Prior to jointing stage and 2 inch broadleaf weeds.
4. Target weed = marestail (ERICA).
5. No yield.
6. Blanket application of Axial XL (16.4 floz/A) in spring for grass if needed, was not needed.
7. ERICA-HR = Herbicide-resistant marestail (glyphosate).
8. Not harvested.

Southern Illinois University

Fall-Applied Residual Herbicides in Winter Wheat followed by Soybean Double-Crop - Annual Bluegrass.

Trial ID: 12-ARC-13-W70
Location: Agronomy Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 10-26-11

Trial Location

City: Carbondale
State/Prov.: IL
Postal Code: 62901
Country: USA

Objectives:
Determine the value of residual ALS herbicides for control of annual bluegrass and other weeds in winter wheat.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: TRZAW Triticum aestivum (winter) Winter wheat
Variety: P25R62
BBCH Scale: BCER **Planting Date:** 10-26-11
Planting Method: SEEDED Seeded **Rate, Unit:** 1.4 millionS/A
Depth, Unit: 1 IN
Row Spacing, Unit: 7.5 IN

Crop 2: GLXMA Glycine max Soybean
Variety: P94Y50 **Description:** RR
BBCH Scale: BSOY **Planting Date:** 6-13-12
Planting Method: SEEDED Seeded **Rate, Unit:** 175000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** POAAN - Poa annua L.
Common Name: bluegrass, annual

Pest 2 Type: W **Code:** ALLVI - Allium vineale L.
Common Name: garlic, wild

Pest 3 Type: W **Code:** LAMAM - Lamium amplexicaule L.
Common Name: henbit

Pest 4 Type: W **Code:** CERVU - Cerastium vulgatum L.
Common Name: chickweed, mouseear

Pest 5 Type: W **Code:** ERICA - Conyza canadensis (L.) Crong.
Common Name: horseweed

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	Fall: N 30 LB/A, P2O5 0 LB/A, K2O 0 LB/A
2.	Spring: N 85 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 2.2 **Texture:** SIL SILT LOAM
pH: 6.2 **Soil Name:** WEIR
CEC: 7.3

Fall-Applied Residual Herbicides in Winter Wheat followed by Soybean Double-Crop - Annual Bluegrass.

Trial ID: 12-ARC-13-W70
Location: Agronomy Res. Center
Investigator: Bryan Young

Additional Measured Elements

Element	Quantity	Unit
P1	63	LB/A
K	217	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Carbondale IL **Distance, Unit:** 0.5 MI

Application Description

	A	B
Application Date:	10-29-11	12-2-11
Time of Day:	11:30	14:00
Application Method:	Spray	Spray
Application Timing:	PRE	FALL
Application Placement:	BROSOI	BROFOL
Applied By:	NRJ	NRJ
Air Temperature, Unit:	55 F	55 F
% Relative Humidity:	33	56
Wind Velocity, Unit:	3 MPH	1 MPH
Wind Direction:	W	NE
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	50 F	46 F
Soil Moisture:	NORMAL	ABONOR
% Cloud Cover:	0	5
Next Rain Occurred On:	11-3-11	12-4-11

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	TRZAW BCER	TRZAW BCER
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	FK1
Height, Unit:		4 IN
Height Minimum, Maximum:		3 4
Crop 2 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	NA

Southern Illinois University

Fall-Applied Residual Herbicides in Winter Wheat followed by Soybean Double-Crop - Annual Bluegrass.

Trial ID: 12-ARC-13-W70
Location: Agronomy Res. Center
Investigator: Bryan Young

Pest Stage At Each Application

	A		B	
Pest 1 Code, Type, Scale:	POAAN	W DESC	POAAN	W DESC
Stage Majority, Percent:	2		8	
Stage Minimum, Percent:	1		3	
Stage Maximum, Percent:	3		10	
Height, Unit:	1	IN	1	IN
Height Minimum, Maximum:	0.5	1	0.5	1
Density, Unit:	10	FT2	10	FT2
Pest 2 Code, Type, Scale:	ALLVI	W DESC	ALLVI	W DESC
Stage Majority, Percent:	2		2	
Stage Minimum, Percent:	1		1	
Stage Maximum, Percent:	3		3	
Height, Unit:	4	IN	4	IN
Height Minimum, Maximum:	2	6	2	6
Density, Unit:	5	FT2	5	FT2
Pest 3 Code, Type, Scale:	LAMAM	W DESC	LAMAM	W DESC
Stage Majority, Percent:	4		6	
Stage Minimum, Percent:	4		4	
Stage Maximum, Percent:	6		15	
Height, Unit:	1	IN	1	IN
Height Minimum, Maximum:	0.5	1	0.5	1
Density, Unit:	4	FT2	4	FT2
Pest 4 Code, Type, Scale:	CERVU	W DESC	CERVU	W DESC
Stage Majority, Percent:	4		6	
Stage Minimum, Percent:	2		4	
Stage Maximum, Percent:	6		10	
Height, Unit:	0.5	IN	1	IN
Height Minimum, Maximum:	0.5	1	1	1.5
Density, Unit:	1	FT2	1	FT2
Pest 5 Code, Type, Scale:	ERICA	W DESC	ERICA	W DESC
Stage Majority, Percent:	NA		NA	

Application Equipment

	A		B	
Appl. Equipment:	CO2 sprayer		CO2 sprayer	
Equipment Type:	BACSPR		BACSPR	
Operation Pressure, Unit:	30	PSI	30	PSI
Nozzle Type:	XR		XR	
Nozzle Size:	8002		8002	
Boom Length, Unit:	6.67 FT		6.67 FT	
Spray Volume, Unit:	15	GPA	15	GPA

Fall-Applied Residual Herbicides in Winter Wheat followed by Soybean Double-Crop - Annual Bluegrass.

Trial ID: 12-ARC-13-W70
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	TRZAW 6-4-12 Moisture Percent	TRZAW 6-4-12 Test wt. lb/bu	TRZAW 6-4-12 Yield bu/A	TRZAW 12-9-11 Injury Percent 7 DA-B	TRZAW 12-16-11 Injury Percent 14 DA-B	TRZAW 12-30-11 Injury Percent 28 DA-B
1	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	B	13.0 a	56.7 a	62 d	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B						
2	FINESSE	75	WG	0.0094	lb ai/a	0.2	oz/a	FALL	B	12.8 a	55.8 a	62 d	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B						
3	FINESSE	75	WG	0.0188	lb ai/a	0.4	oz/a	FALL	B	12.6 a	53.7 a	70 d	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B						
4	ALLY EXTRA SG	52	SG	0.0065	lb ai/a	0.2	oz/a	FALL	B	12.7 a	54.6 a	61 d	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B						
5	ALLY EXTRA SG	52	SG	0.013	lb ai/a	0.4	oz/a	FALL	B	12.7 a	55.4 a	77 bcd	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B						
6	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	B	12.5 a	54.8 a	73 cd	0 a	0 a	0 a
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	FALL	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B						
7	FINESSE	75	WG	0.0094	lb ai/a	0.2	oz/a	FALL	B	12.0 a	51.8 a	72 cd	0 a	0 a	0 a
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	FALL	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B						
8	ALLY EXTRA SG	52	SG	0.0065	lb ai/a	0.2	oz/a	FALL	B	12.7 a	53.8 a	64 d	0 a	0 a	0 a
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	FALL	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B						
9	POWERFLEX	7.5	WG	0.0164	lb ai/a	3.5	oz/a	FALL	B	12.9 a	54.8 a	62 d	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B						
10	FINESSE	75	WG	0.0117	lb ai/a	0.25	oz/a	PRE	A	12.6 a	54.7 a	88 abc	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	A						
11	FINESSE	75	WG	0.0117	lb ai/a	0.25	oz/a	PRE	A	12.5 a	55.7 a	94 a	0 a	0 a	0 a
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	PRE	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	A						
12	FINESSE	75	WG	0.0234	lb ai/a	0.5	oz/a	PRE	A	12.6 a	54.6 a	87 abc	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	A						
13	NONTREATED									13.0 a	54.7 a	46 e	0 a	0 a	0 a
14	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	12.4 a	53.6 a	89 ab	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A						
LSD (P=.05)										0.88	3.24	15.6	0.0	0.0	0.0
Standard Deviation										0.52	1.93	9.3	0.0	0.0	0.0
CV										4.15	3.54	12.96	0.0	0.0	0.0
Replicate F										2.523	1.155	6.162	0.000	0.000	0.000
Replicate Prob(F)										0.0997	0.3308	0.0064	1.0000	1.0000	1.0000
Treatment F										0.718	1.092	6.494	0.000	0.000	0.000
Treatment Prob(F)										0.7301	0.4066	0.0001	1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Fall-Applied Residual Herbicides in Winter Wheat followed by Soybean Double-Crop - Annual Bluegrass.

Trial ID: 12-ARC-13-W70
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	POAAN	POAAN	POAAN	POAAN
	Pest Code									POAAN	POAAN	POAAN	POAAN
	Crop Code												
	Rating Date									12-30-11	3-1-12	4-1-12	5-1-12
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing												
	Trt-Eval Interval									28 DA-B	90 DA-B	121 DA-B	151 DA-B
1	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	B	0 d	0 b	0 b	0 b
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B				
2	FINESSE	75	WG	0.0094	lb ai/a	0.2	oz/a	FALL	B	0 d	20 b	23 b	23 b
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B				
3	FINESSE	75	WG	0.0188	lb ai/a	0.4	oz/a	FALL	B	0 d	13 b	17 b	17 b
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B				
4	ALLY EXTRA SG	52	SG	0.0065	lb ai/a	0.2	oz/a	FALL	B	0 d	0 b	0 b	0 b
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B				
5	ALLY EXTRA SG	52	SG	0.013	lb ai/a	0.4	oz/a	FALL	B	0 d	0 b	0 b	0 b
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B				
6	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	B	20 c	17 b	17 b	17 b
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	FALL	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B				
7	FINESSE	75	WG	0.0094	lb ai/a	0.2	oz/a	FALL	B	20 c	13 b	23 b	23 b
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	FALL	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B				
8	ALLY EXTRA SG	52	SG	0.0065	lb ai/a	0.2	oz/a	FALL	B	22 c	3 b	0 b	0 b
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	FALL	B				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B				
9	POWERFLEX	7.5	WG	0.0164	lb ai/a	3.5	oz/a	FALL	B	0 d	0 b	0 b	0 b
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B				
10	FINESSE	75	WG	0.0117	lb ai/a	0.25	oz/a	PRE	A	63 b	80 a	84 a	86 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	A				
11	FINESSE	75	WG	0.0117	lb ai/a	0.25	oz/a	PRE	A	93 a	90 a	94 a	96 a
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	PRE	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	A				
12	FINESSE	75	WG	0.0234	lb ai/a	0.5	oz/a	PRE	A	72 b	84 a	87 a	90 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	A				
13	NONTREATED									0 d	0 b	0 b	0 b
14	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	97 a	90 a	90 a	90 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A				
	LSD (P=.05)									13.4	24.7	26.3	26.8
	Standard Deviation									8.0	14.7	15.7	15.9
	CV									28.97	50.12	50.42	50.54
	Replicate F									2.159	0.148	0.625	0.501
	Replicate Prob(F)									0.1357	0.8636	0.5429	0.6118
	Treatment F									64.182	19.919	18.510	18.573
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Fall-Applied Residual Herbicides in Winter Wheat followed by Soybean Double-Crop - Annual Bluegrass.

Trial ID: 12-ARC-13-W70
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ALLVI 12-30-11 Control Percent 28 DA-B	ALLVI 3-1-12 Control Percent 90 DA-B	ALLVI 4-1-12 Control Percent 121 DA-B	ALLVI 5-1-12 Control Percent 151 DA-B	ALLVI 6-1-12 Control Percent 182 DA-B
1	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	0 c	99 a	96 a	97 a	97 ab
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B					
2	FINESSE	75 WG		0.0094	lb ai/a	0.2	oz/a	FALL	B	0 c	76 b	93 a	95 a	99 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B					
3	FINESSE	75 WG		0.0188	lb ai/a	0.4	oz/a	FALL	B	0 c	99 a	96 a	98 a	99 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B					
4	ALLY EXTRA SG	52 SG		0.0065	lb ai/a	0.2	oz/a	FALL	B	0 c	93 ab	90 a	93 a	98 ab
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B					
5	ALLY EXTRA SG	52 SG		0.013	lb ai/a	0.4	oz/a	FALL	B	0 c	99 a	99 a	98 a	98 ab
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B					
6	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	0 c	83 ab	85 a	98 a	98 ab
	SENCOR	75 WG		0.188	lb ai/a	4.0	oz/a	FALL	B					
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B					
7	FINESSE	75 WG		0.0094	lb ai/a	0.2	oz/a	FALL	B	0 c	38 c	40 b	96 a	98 ab
	SENCOR	75 WG		0.188	lb ai/a	4.0	oz/a	FALL	B					
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B					
8	ALLY EXTRA SG	52 SG		0.0065	lb ai/a	0.2	oz/a	FALL	B	0 c	93 ab	93 a	95 a	96 ab
	SENCOR	75 WG		0.188	lb ai/a	4.0	oz/a	FALL	B					
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B					
9	POWERFLEX	7.5 WG		0.0164	lb ai/a	3.5	oz/a	FALL	B	0 c	17 cd	20 bc	58 b	94 b
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B					
10	FINESSE	75 WG		0.0117	lb ai/a	0.25	oz/a	PRE	A	75 b	83 ab	92 a	99 a	99 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	PRE	A					
11	FINESSE	75 WG		0.0117	lb ai/a	0.25	oz/a	PRE	A	82 a	88 ab	90 a	95 a	98 ab
	SENCOR	75 WG		0.188	lb ai/a	4.0	oz/a	PRE	A					
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	PRE	A					
12	FINESSE	75 WG		0.0234	lb ai/a	0.5	oz/a	PRE	A	83 a	95 ab	95 a	98 a	99 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	PRE	A					
13	NONTREATED									0 c	0 d	0 c	0 c	0 c
14	ROUNDUP POWERMAX	4.5 SL		0.77	lb ae/a	22	fl oz/a	PRE	A	85 a	85 ab	83 a	92 a	97 ab
	N-PAK AMS	100 SL		5	% v/v	5	% v/v	PRE	A					
LSD (P=.05)										5.6	22.6	23.8	23.0	4.6
Standard Deviation										3.4	13.5	14.2	13.7	2.7
CV										14.49	17.99	18.54	15.83	3.02
Replicate F										3.947	1.871	1.500	1.363	0.468
Replicate Prob(F)										0.0318	0.1741	0.2418	0.2736	0.6312
Treatment F										386.045	17.219	15.163	11.595	272.328
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001

Fall-Applied Residual Herbicides in Winter Wheat followed by Soybean Double-Crop - Annual Bluegrass.

Trial ID: 12-ARC-13-W70
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	LAMAM	LAMAM	LAMAM
	Pest Code									LAMAM	LAMAM	LAMAM
	Crop Code											
	Rating Date									12-30-11	3-1-12	4-1-12
	Rating Type									Control	Control	Control
	Rating Unit									Percent	Percent	Percent
	Rating Timing											
	Trt-Eval Interval									28 DA-B	90 DA-B	121 DA-B
1	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	B	0 b	85 d	97 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B			
2	FINESSE	75	WG	0.0094	lb ai/a	0.2	oz/a	FALL	B	0 b	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B			
3	FINESSE	75	WG	0.0188	lb ai/a	0.4	oz/a	FALL	B	0 b	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B			
4	ALLY EXTRA SG	52	SG	0.0065	lb ai/a	0.2	oz/a	FALL	B	0 b	92 bc	98 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B			
5	ALLY EXTRA SG	52	SG	0.013	lb ai/a	0.4	oz/a	FALL	B	0 b	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B			
6	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	B	0 b	88 cd	91 b
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	FALL	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B			
7	FINESSE	75	WG	0.0094	lb ai/a	0.2	oz/a	FALL	B	0 b	99 a	99 a
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	FALL	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B			
8	ALLY EXTRA SG	52	SG	0.0065	lb ai/a	0.2	oz/a	FALL	B	0 b	97 a	98 a
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	FALL	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B			
9	POWERFLEX	7.5	WG	0.0164	lb ai/a	3.5	oz/a	FALL	B	0 b	17 e	25 c
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B			
10	FINESSE	75	WG	0.0117	lb ai/a	0.25	oz/a	PRE	A	99 a	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	A			
11	FINESSE	75	WG	0.0117	lb ai/a	0.25	oz/a	PRE	A	98 a	99 a	99 a
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	PRE	A			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	A			
12	FINESSE	75	WG	0.0234	lb ai/a	0.5	oz/a	PRE	A	99 a	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	A			
13	NONTREATED									0 b	0 f	0 d
14	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	98 a	96 ab	97 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A			
	LSD (P=.05)									0.7	5.2	3.3
	Standard Deviation									0.4	3.1	2.0
	CV									1.58	3.7	2.31
	Replicate F									0.481	0.754	0.554
	Replicate Prob(F)									0.6233	0.4803	0.5812
	Treatment F									32450.892	329.140	758.044
	Treatment Prob(F)									0.0001	0.0001	0.0001

Fall-Applied Residual Herbicides in Winter Wheat followed by Soybean Double-Crop - Annual Bluegrass.

Trial ID: 12-ARC-13-W70
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	CERVU 12-30-11 Control Percent 28 DA-B	CERVU 3-1-12 Control Percent 90 DA-B	CERVU 4-1-12 Control Percent 121 DA-B	ERICA 5-1-12 Control Percent 151 DA-B	ERICA 6-1-12 Control Percent 182 DA-B	GLXMA 6-26-12 Injury Percent 7 DAE	GLXMA 7-17-12 Injury Percent 28 DAE
1	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	0 d	99 a	99 a	85 b	84 b	0 a	0 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B							
2	FINESSE	75 WG		0.0094	lb ai/a	0.2	oz/a	FALL	B	0 d	99 a	99 a	99 a	99 a	0 a	0 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B							
3	FINESSE	75 WG		0.0188	lb ai/a	0.4	oz/a	FALL	B	0 d	99 a	99 a	99 a	99 a	0 a	0 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B							
4	ALLY EXTRA SG	52 SG		0.0065	lb ai/a	0.2	oz/a	FALL	B	0 d	99 a	99 a	98 a	98 a	0 a	0 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B							
5	ALLY EXTRA SG	52 SG		0.013	lb ai/a	0.4	oz/a	FALL	B	0 d	99 a	99 a	93 ab	93 ab	0 a	0 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B							
6	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	50 c	99 a	99 a	93 ab	94 ab	0 a	0 a
	SENCOR	75 WG		0.188	lb ai/a	4.0	oz/a	FALL	B							
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B							
7	FINESSE	75 WG		0.0094	lb ai/a	0.2	oz/a	FALL	B	53 c	99 a	99 a	99 a	99 a	0 a	0 a
	SENCOR	75 WG		0.188	lb ai/a	4.0	oz/a	FALL	B							
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B							
8	ALLY EXTRA SG	52 SG		0.0065	lb ai/a	0.2	oz/a	FALL	B	60 b	99 a	99 a	99 a	99 a	0 a	0 a
	SENCOR	75 WG		0.188	lb ai/a	4.0	oz/a	FALL	B							
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B							
9	POWERFLEX	7.5 WG		0.0164	lb ai/a	3.5	oz/a	FALL	B	0 d	99 a	99 a	90 ab	94 ab	0 a	0 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B							
10	FINESSE	75 WG		0.0117	lb ai/a	0.25	oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a	0 a	0 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	PRE	A							
11	FINESSE	75 WG		0.0117	lb ai/a	0.25	oz/a	PRE	A	98 a	99 a	99 a	99 a	99 a	0 a	0 a
	SENCOR	75 WG		0.188	lb ai/a	4.0	oz/a	PRE	A							
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	PRE	A							
12	FINESSE	75 WG		0.0234	lb ai/a	0.5	oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a	0 a	0 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	PRE	A							
13	NONTREATED									0 d	0 c	0 c	0 c	0 c	0 a	0 a
14	ROUNDUP POWERMAX	4.5 SL		0.77	lb ae/a	22	fl oz/a	PRE	A	98 a	96 b	96 b	96 ab	98 a	0 a	0 a
	N-PAK AMS	100 SL		5	% v/v	5	% v/v	PRE	A							
LSD (P=.05)										5.1	1.0	1.0	12.6	11.9	0.0	0.0
Standard Deviation										3.0	0.6	0.6	7.5	7.1	0.0	0.0
CV										7.61	0.67	0.67	8.41	7.9	0.0	0.0
Replicate F										1.768	1.000	1.000	1.189	0.893	0.000	0.000
Replicate Prob(F)										0.1905	0.3816	0.3816	0.3205	0.4215	1.0000	1.0000
Treatment F										642.656	5494.217	5494.217	36.224	40.903	0.000	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	1.0000	1.0000

Southern Illinois University

Fall-Applied Residual Herbicides in Winter Wheat followed by Soybean Double-Crop - Annual Bluegrass.

Trial ID: 12-ARC-13-W70
Location: Agronomy Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: DuPont (USA-12-210).
2. Ratings: CI 7, 14 + 28 DA-B, plant double crop soybean CI 7 + 28 DAE.
   WC 28 DA-B, March 1, April 1, May 1, and June 1.
3. Yield - double crop soybean (if possible).
4. Target weed annual bluegrass (POAAN).
5. Blanket POST in spring if needed Axial XL (16.4 floz/A) plus Harmony Extra SG (0.75 oz/A)
   for BL/grass control.
6. Harvested wheat 6-4-12, 5 ft by 27.5 ft.
7. Planted double-crop soybean (P94Y50) on 6-13-12.
8. Soybean crop was not harvested due to dry conditions.

Southern Illinois University

Fall-Applied Residual Herbicides in Winter Wheat followed by Soybean Double-Crop - Marestail.

Trial ID: 12-ARC-25-N60
Location: Agronomy Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 10-26-11

Trial Location

City: Carbondale
State/Prov.: IL
Postal Code: 62901
Country: USA

Objectives:
Determine the value of residual ALS herbicides for control of marestail and other weeds in winter wheat.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: TRZAW Triticum aestivum (winter) Winter wheat
Variety: P25R62
BBCH Scale: BCER **Planting Date:** 10-26-11
Planting Method: SEEDED Seeded **Rate, Unit:** 1.4 millionS/A
Depth, Unit: 1 IN
Row Spacing, Unit: 7.5 IN

Crop 2: GLXMA Glycine max Soybean
Variety: P94Y50 **Description:** RR
BBCH Scale: BSOY **Planting Date:** 6-13-12
Planting Method: SEEDED Seeded **Rate, Unit:** 175000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** ERICA - Conyza canadensis (L.) Crong.
Common Name: horseweed

Pest 2 Type: W **Code:** ALLVI - Allium vineale L.
Common Name: garlic, wild

Pest 3 Type: W **Code:** LAMPU - Lamium purpureum L.
Common Name: deadnettle, purple

Pest 4 Type: W **Code:** CERVU - Cerastium vulgatum L.
Common Name: chickweed, mouseear

Pest 5 Type: W **Code:** ALOCA - Alopecurus carolinianus Walt.
Common Name: foxtail, Carolina

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	Fall: N 30 LB/A, P2O5 0 LB/A, K2O 0 LB/A
2.	Spring: N 85 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Carbondale IL **Distance, Unit:** 0.5 MI

Southern Illinois University

Fall-Applied Residual Herbicides in Winter Wheat followed by Soybean Double-Crop - Marestail.

Trial ID: 12-ARC-25-N60
Location: Agronomy Res. Center
Investigator: Bryan Young

Application Description

	A	B
Application Date:	10-29-11	12-2-11
Time of Day:	12:00	16:00
Application Method:	Spray	Spray
Application Timing:	PRE	FALL
Application Placement:	BROSOI	BROFOL
Applied By:	NRJ	NRJ
Air Temperature, Unit:	55 F	53 F
% Relative Humidity:	33	56
Wind Velocity, Unit:	2 MPH	1 MPH
Wind Direction:	W	NE
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	50 F	46 F
Soil Moisture:	NORMAL	ABONOR
% Cloud Cover:	0	10

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	TRZAW BCER	TRZAW BCER
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	FK1
Height, Unit:		4 IN
Height Minimum, Maximum:		3 4
Crop 2 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	NA

Southern Illinois University

Fall-Applied Residual Herbicides in Winter Wheat followed by Soybean Double-Crop - Marestail.

Trial ID: 12-ARC-25-N60
Location: Agronomy Res. Center
Investigator: Bryan Young

Pest Stage At Each Application

	A		B	
Pest 1 Code, Type, Scale:	ERICA	W DESC	ERICA	W DESC
Stage Majority, Percent:	4		8	
Stage Minimum, Percent:	2		4	
Stage Maximum, Percent:	8		12	
Height, Unit:	0.5	IN	1	IN
Height Minimum, Maximum:	0.5	1	0.5	1.5
Density, Unit:	2	FT2	2	FT2
Pest 2 Code, Type, Scale:	ALLVI	W DESC	ALLVI	W DESC
Stage Majority, Percent:	2		2	
Stage Minimum, Percent:	1		1	
Stage Maximum, Percent:	3		3	
Height, Unit:	4	IN	4	IN
Height Minimum, Maximum:	2	6	2	6
Density, Unit:	4	FT2	4	FT2
Pest 3 Code, Type, Scale:	LAMPU	W DESC	LAMPU	W DESC
Stage Majority, Percent:	4		6	
Stage Minimum, Percent:	2		4	
Stage Maximum, Percent:	6		10	
Height, Unit:	0.5	IN	1	IN
Height Minimum, Maximum:	0.5	1	0.5	1.5
Density, Unit:	2	FT2	2	FT2
Pest 4 Code, Type, Scale:	CERVU	W DESC	CERVU	W DESC
Stage Majority, Percent:	4		6	
Stage Minimum, Percent:	2		4	
Stage Maximum, Percent:	6		10	
Height, Unit:	0.5	IN	1	IN
Height Minimum, Maximum:	0.5	1	0.5	1.5
Density, Unit:	2	FT2	2	FT2
Pest 5 Code, Type, Scale:	ALOCA	W DESC	ALOCA	W DESC
Stage Majority, Percent:	4		8	
Stage Minimum, Percent:	2		4	
Stage Maximum, Percent:	6		10	
Height, Unit:	1	IN	1	IN
Height Minimum, Maximum:	0.5	1.5	1	2
Density, Unit:	3	FT2	3	FT2

Application Equipment

	A		B	
Appl. Equipment:	CO2 sprayer		CO2 sprayer	
Equipment Type:	BACSPR		BACSPR	
Operation Pressure, Unit:	30	PSI	30	PSI
Nozzle Type:	XR		XR	
Nozzle Size:	8002		8002	
Boom Length, Unit:	6.67 FT		6.67 FT	
Spray Volume, Unit:	15	GPA	15	GPA

Fall-Applied Residual Herbicides in Winter Wheat followed by Soybean Double-Crop - Marestail.

Trial ID: 12-ARC-25-N60
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	TRZAW 6-4-12 Moisture Percent 221 DA-A	TRZAW 6-4-12 Test wt. lb/bu 221 DA-A	TRZAW 6-4-12 Yield bu/A 221 DA-A	TRZAW 12-9-11 Injury Percent 7 DA-B	TRZAW 12-16-11 Injury Percent 14 DA-B	TRZAW 12-30-11 Injury Percent 28 DA-B
1	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	B	11.9 a	53.9 a	62 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B						
2	FINESSE	75	WG	0.0094	lb ai/a	0.2	oz/a	FALL	B	11.2 a	51.5 a	83 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B						
3	FINESSE	75	WG	0.0188	lb ai/a	0.4	oz/a	FALL	B	11.3 a	51.2 a	82 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B						
4	ALLY EXTRA SG	52	SG	0.0065	lb ai/a	0.2	oz/a	FALL	B	11.4 a	49.6 a	73 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B						
5	ALLY EXTRA SG	52	SG	0.013	lb ai/a	0.4	oz/a	FALL	B	11.6 a	51.4 a	66 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B						
6	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	B	11.4 a	51.0 a	70 a	0 a	0 a	0 a
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	FALL	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B						
7	FINESSE	75	WG	0.0094	lb ai/a	0.2	oz/a	FALL	B	12.0 a	51.7 a	63 a	0 a	0 a	0 a
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	FALL	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B						
8	ALLY EXTRA SG	52	SG	0.0065	lb ai/a	0.2	oz/a	FALL	B	11.9 a	52.3 a	72 a	0 a	0 a	0 a
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	FALL	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B						
9	POWERFLEX	7.5	WG	0.0164	lb ai/a	3.5	oz/a	FALL	B	11.3 a	50.4 a	76 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B						
10	FINESSE	75	WG	0.0117	lb ai/a	0.25	oz/a	PRE	A	11.8 a	52.0 a	65 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	A						
11	FINESSE	75	WG	0.0117	lb ai/a	0.25	oz/a	PRE	A	11.9 a	53.8 a	66 a	0 a	0 a	0 a
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	PRE	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	A						
12	FINESSE	75	WG	0.0234	lb ai/a	0.5	oz/a	PRE	A	12.0 a	53.2 a	71 a	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	A						
13	NONTREATED									12.2 a	52.7 a	55 a	0 a	0 a	0 a
14	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	11.5 a	52.5 a	83 a	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A						
LSD (P=.05)										0.89	4.62	23.1	0.0	0.0	0.0
Standard Deviation										0.53	2.74	13.8	0.0	0.0	0.0
CV										4.55	5.28	19.52	0.0	0.0	0.0
Replicate F										0.029	1.691	12.624	0.000	0.000	0.000
Replicate Prob(F)										0.9713	0.2048	0.0002	1.0000	1.0000	1.0000
Treatment F										1.113	0.597	1.120	0.000	0.000	0.000
Treatment Prob(F)										0.3934	0.8339	0.3886	1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Fall-Applied Residual Herbicides in Winter Wheat followed by Soybean Double-Crop - Marestail.

Trial ID: 12-ARC-25-N60
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA 12-30-11 Control Percent 28 DA-B	ERICA 3-1-12 Control Percent 90 DA-B	ERICA 4-1-12 Control Percent 121 DA-B	ERICA 5-1-12 Control Percent 151 DA-B	ERICA 6-1-12 Control Percent 182 DA-B
1	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	B	23 cd	88 abc	70 abc	60 a	63 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B					
2	FINESSE	75	WG	0.0094	lb ai/a	0.2	oz/a	FALL	B	20 cd	85 abc	78 abc	73 a	78 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B					
3	FINESSE	75	WG	0.0188	lb ai/a	0.4	oz/a	FALL	B	40 b	63 d	60 c	75 a	81 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B					
4	ALLY EXTRA SG	52	SG	0.0065	lb ai/a	0.2	oz/a	FALL	B	20 cd	77 bcd	68 abc	76 a	72 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B					
5	ALLY EXTRA SG	52	SG	0.013	lb ai/a	0.4	oz/a	FALL	B	27 cd	83 abc	62 bc	65 a	60 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B					
6	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	B	17 d	73 cd	73 abc	70 a	77 a
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	FALL	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B					
7	FINESSE	75	WG	0.0094	lb ai/a	0.2	oz/a	FALL	B	20 cd	80 abc	73 abc	63 a	67 a
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	FALL	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B					
8	ALLY EXTRA SG	52	SG	0.0065	lb ai/a	0.2	oz/a	FALL	B	23 cd	80 abc	80 ab	92 a	90 a
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	FALL	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B					
9	POWERFLEX	7.5	WG	0.0164	lb ai/a	3.5	oz/a	FALL	B	28 c	87 abc	70 abc	77 a	78 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B					
10	FINESSE	75	WG	0.0117	lb ai/a	0.25	oz/a	PRE	A	99 a	93 ab	77 abc	70 a	67 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	A					
11	FINESSE	75	WG	0.0117	lb ai/a	0.25	oz/a	PRE	A	99 a	95 a	77 abc	82 a	78 a
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	PRE	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	A					
12	FINESSE	75	WG	0.0234	lb ai/a	0.5	oz/a	PRE	A	98 a	93 ab	86 a	73 a	73 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	A					
13	NONTREATED									0 e	0 e	0 d	0 b	0 b
14	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	95 a	80 abc	68 abc	73 a	83 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A					
LSD (P=.05)										10.8	16.1	19.4	32.9	33.0
Standard Deviation										6.4	9.6	11.5	19.6	19.7
CV										14.74	12.47	17.14	28.95	28.46
Replicate F										0.684	7.224	3.103	0.245	1.063
Replicate Prob(F)										0.5133	0.0032	0.0619	0.7841	0.3600
Treatment F										97.502	18.311	9.551	3.441	3.588
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0035	0.0027

Southern Illinois University

Fall-Applied Residual Herbicides in Winter Wheat followed by Soybean Double-Crop - Marestail.

Trial ID: 12-ARC-25-N60
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ALLVI	ALLVI	ALLVI	ALLVI	ALLVI
	Pest Code									ALLVI	ALLVI	ALLVI	ALLVI	ALLVI
	Crop Code													
	Rating Date									12-30-11	3-1-12	4-1-12	5-1-12	6-1-12
	Rating Type									Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent
	Rating Timing													
	Trt-Eval Interval									28 DA-B	90 DA-B	121 DA-B	151 DA-B	182 DA-B
1	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	10 d	93 a	95 a	96 abc	93 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B					
2	FINESSE	75 WG		0.0094	lb ai/a	0.2	oz/a	FALL	B	10 d	92 a	92 a	98 ab	99 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B					
3	FINESSE	75 WG		0.0188	lb ai/a	0.4	oz/a	FALL	B	10 d	90 ab	90 ab	99 a	99 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B					
4	ALLY EXTRA SG	52 SG		0.0065	lb ai/a	0.2	oz/a	FALL	B	10 d	88 ab	88 ab	96 abc	89 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B					
5	ALLY EXTRA SG	52 SG		0.013	lb ai/a	0.4	oz/a	FALL	B	10 d	93 a	92 a	93 bc	98 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B					
6	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	10 d	88 ab	88 ab	93 bc	98 a
	SENCOR	75 WG		0.188	lb ai/a	4.0	oz/a	FALL	B					
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B					
7	FINESSE	75 WG		0.0094	lb ai/a	0.2	oz/a	FALL	B	13 d	73 c	77 c	91 c	92 a
	SENCOR	75 WG		0.188	lb ai/a	4.0	oz/a	FALL	B					
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B					
8	ALLY EXTRA SG	52 SG		0.0065	lb ai/a	0.2	oz/a	FALL	B	10 d	87 ab	87 ab	95 abc	98 a
	SENCOR	75 WG		0.188	lb ai/a	4.0	oz/a	FALL	B					
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B					
9	POWERFLEX	7.5 WG		0.0164	lb ai/a	3.5	oz/a	FALL	B	10 d	80 bc	82 bc	96 abc	94 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B					
10	FINESSE	75 WG		0.0117	lb ai/a	0.25	oz/a	PRE	A	92 a	93 a	93 a	99 a	99 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	PRE	A					
11	FINESSE	75 WG		0.0117	lb ai/a	0.25	oz/a	PRE	A	85 bc	95 a	95 a	99 ab	99 a
	SENCOR	75 WG		0.188	lb ai/a	4.0	oz/a	PRE	A					
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	PRE	A					
12	FINESSE	75 WG		0.0234	lb ai/a	0.5	oz/a	PRE	A	88 ab	93 a	95 a	99 a	99 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	PRE	A					
13	NONTREATED									0 e	0 d	0 d	0 d	0 b
14	ROUNDUP POWERMAX	4.5 SL		0.77	lb ae/a	22	fl oz/a	PRE	A	83 c	87 ab	87 ab	95 abc	98 a
	N-PAK AMS	100 SL		5	% v/v	5	% v/v	PRE	A					
	LSD (P=.05)									4.6	10.5	8.5	5.7	10.7
	Standard Deviation									2.7	6.3	5.0	3.4	6.4
	CV									8.66	7.6	6.08	3.79	7.1
	Replicate F									1.515	0.450	0.441	6.940	1.425
	Replicate Prob(F)									0.2385	0.6423	0.6484	0.0038	0.2586
	Treatment F									538.607	45.692	70.437	174.826	50.078
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001

Fall-Applied Residual Herbicides in Winter Wheat followed by Soybean Double-Crop - Marestail.

Trial ID: 12-ARC-25-N60
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	LAMPU	LAMPU	LAMPU	CERVU	CERVU	CERVU
	Pest Code									LAMPU	LAMPU	LAMPU	CERVU	CERVU	CERVU
	Crop Code														
	Rating Date									12-30-11	3-1-12	4-1-12	12-30-11	3-1-12	4-1-12
	Rating Type									Control	Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
	Rating Timing														
	Trt-Eval Interval									28 DA-B	90 DA-B	121 DA-B	28 DA-B	90 DA-B	121 DA-B
1	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	20 de	75 ab	75 a	53 cde	99 a	99 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B						
2	FINESSE	75 WG		0.0094	lb ai/a	0.2	oz/a	FALL	B	27 cd	74 ab	75 a	67 bc	99 a	99 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B						
3	FINESSE	75 WG		0.0188	lb ai/a	0.4	oz/a	FALL	B	47 bc	98 ab	99 a	62 bcd	99 a	99 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B						
4	ALLY EXTRA SG	52 SG		0.0065	lb ai/a	0.2	oz/a	FALL	B	37 bcd	90 ab	93 a	57 cde	98 a	98 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B						
5	ALLY EXTRA SG	52 SG		0.013	lb ai/a	0.4	oz/a	FALL	B	50 b	96 ab	97 a	62 bcd	99 a	99 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B						
6	HARMONY EXTRA SG	50 SG		0.0234	lb ai/a	0.75	oz/a	FALL	B	23 d	88 ab	91 a	53 cde	99 a	99 a
	SENCOR	75 WG		0.188	lb ai/a	4.0	oz/a	FALL	B						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B						
7	FINESSE	75 WG		0.0094	lb ai/a	0.2	oz/a	FALL	B	18 de	90 ab	90 a	60 bcd	99 a	99 a
	SENCOR	75 WG		0.188	lb ai/a	4.0	oz/a	FALL	B						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B						
8	ALLY EXTRA SG	52 SG		0.0065	lb ai/a	0.2	oz/a	FALL	B	20 de	90 ab	91 a	43 e	99 a	99 a
	SENCOR	75 WG		0.188	lb ai/a	4.0	oz/a	FALL	B						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B						
9	POWERFLEX	7.5 WG		0.0164	lb ai/a	3.5	oz/a	FALL	B	35 bcd	68 b	75 a	47 de	96 a	98 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	FALL	B						
10	FINESSE	75 WG		0.0117	lb ai/a	0.25	oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a	99 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	PRE	A						
11	FINESSE	75 WG		0.0117	lb ai/a	0.25	oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a	99 a
	SENCOR	75 WG		0.188	lb ai/a	4.0	oz/a	PRE	A						
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	PRE	A						
12	FINESSE	75 WG		0.0234	lb ai/a	0.5	oz/a	PRE	A	98 a	99 a	99 a	99 a	99 a	99 a
	NIS (ACTIVATOR 90)	100 SL		0.25	% v/v	0.25	% v/v	PRE	A						
13	NONTREATED									0 e	0 c	0 b	0 f	0 c	0 c
14	ROUNDUP POWERMAX	4.5 SL		0.77	lb ae/a	22	fl oz/a	PRE	A	90 a	90 ab	90 a	73 b	82 b	78 b
	N-PAK AMS	100 SL		5	% v/v	5	% v/v	PRE	A						
	LSD (P=.05)									20.1	30.7	27.4	15.7	2.9	2.9
	Standard Deviation									12.0	18.3	16.3	9.3	1.7	1.7
	CV									25.33	22.17	19.48	14.96	1.9	1.9
	Replicate F									0.329	4.020	4.854	1.338	2.100	1.978
	Replicate Prob(F)									0.7225	0.0301	0.0162	0.2798	0.1427	0.1587
	Treatment F									24.958	5.943	7.496	23.467	712.958	719.764
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Fall-Applied Residual Herbicides in Winter Wheat followed by Soybean Double-Crop - Marestail.

Trial ID: 12-ARC-25-N60
Location: Agronomy Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ALOCA 12-30-11 Control Percent 28 DA-B	ALOCA 3-1-12 Control Percent 90 DA-B	ALOCA 4-1-12 Control Percent 121 DA-B	GLXMA 6-26-12 Injury Percent 7 DAE	GLXMA 7-17-12 Injury Percent 28 DAE
1	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	B	0 e	0 e	0 e	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B					
2	FINESSE	75	WG	0.0094	lb ai/a	0.2	oz/a	FALL	B	53 b	77 b	77 b	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B					
3	FINESSE	75	WG	0.0188	lb ai/a	0.4	oz/a	FALL	B	50 bc	87 ab	87 ab	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B					
4	ALLY EXTRA SG	52	SG	0.0065	lb ai/a	0.2	oz/a	FALL	B	0 e	0 e	0 e	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B					
5	ALLY EXTRA SG	52	SG	0.013	lb ai/a	0.4	oz/a	FALL	B	0 e	0 e	0 e	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B					
6	HARMONY EXTRA SG	50	SG	0.0234	lb ai/a	0.75	oz/a	FALL	B	37 d	23 d	23 d	0 a	0 a
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	FALL	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B					
7	FINESSE	75	WG	0.0094	lb ai/a	0.2	oz/a	FALL	B	47 bcd	33 cd	47 c	0 a	0 a
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	FALL	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B					
8	ALLY EXTRA SG	52	SG	0.0065	lb ai/a	0.2	oz/a	FALL	B	40 cd	43 c	40 cd	0 a	0 a
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	FALL	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B					
9	POWERFLEX	7.5	WG	0.0164	lb ai/a	3.5	oz/a	FALL	B	53 b	88 ab	88 ab	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	B					
10	FINESSE	75	WG	0.0117	lb ai/a	0.25	oz/a	PRE	A	99 a	96 a	96 ab	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	A					
11	FINESSE	75	WG	0.0117	lb ai/a	0.25	oz/a	PRE	A	98 a	95 a	95 ab	0 a	0 a
	SENCOR	75	WG	0.188	lb ai/a	4.0	oz/a	PRE	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	A					
12	FINESSE	75	WG	0.0234	lb ai/a	0.5	oz/a	PRE	A	99 a	98 a	98 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	PRE	A					
13	NONTREATED									0 e	0 e	0 e	0 a	0 a
14	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE	A	98 a	90 a	88 ab	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE	A					
LSD (P=.05)										12.5	12.1	19.4	0.0	0.0
Standard Deviation										7.5	7.2	11.5	0.0	0.0
CV										15.53	13.83	21.86	0.0	0.0
Replicate F										0.340	4.307	2.594	0.000	0.000
Replicate Prob(F)										0.7150	0.0242	0.0939	1.0000	1.0000
Treatment F										81.125	99.830	38.410	0.000	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	1.0000	1.0000

Southern Illinois University

Fall-Applied Residual Herbicides in Winter Wheat followed by Soybean Double-Crop - Marestail.

Trial ID: 12-ARC-25-N60
Location: Agronomy Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: DuPont (USA-12-210).
2. Ratings: CI 7, 14 + 28 DA-B, plant double crop soybean CI 7 + 28 DAE.
   WC 28 DA-B, March 1, April 1, May 1, and June 1.
3. Yield - double crop soybean (if possible).
4. Target weed marestail (ERICA).
5. Blanket POST in spring if needed Axial XL (16.4 floz/A) plus Harmony Extra SG (0.75 oz/A)
   for BL/grass control.
6. Harvested wheat 6-4-12, 5 ft by 27.5 ft.
7. Planted double-crop soybean (P94Y50) on 6-13-12.
   Missing data for soybean injury was due to poor emergenge due to dry soil conditions.
8. Soybean crop was not harvested due to dry conditions.

Glyphosate-Resistant Marestail, Waterhemp or Palmer Amaranth Control

Southern Illinois University

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 12-DSO-ISApostTM
Location: De Soto, IL
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-29-12

Trial Location

City: De Soto
State/Prov.: IL
Postal Code: 62924
Country: USA

Objectives:
Evaluate soybean response and glyphosate-resistant waterhemp control from glyphosate tank-mixtures.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG 4005 **Description:** RR
BBCH Scale: BSOY **Planting Date:** 4-29-12
Planting Method: SEEDED Seeded **Rate, Unit:** 165000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMX	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 27 LB/A, P2O5 69 LB/A, K2O 90 LB/A

Soil Description

% Sand: 14 **% OM:** 2.12 **Texture:** SIL SILT LOAM
% Silt: 67 **pH:** 6.9 **Soil Name:** OKAW
% Clay: 19 **CEC:** 12.7

Additional Measured Elements

Element	Quantity	Unit
P1	112	LB/A
K	386	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 12-DSO-ISApostTM
Location: De Soto, IL
Investigator: Bryan Young

Application Description

	A
Application Date:	6-2-12
Time of Day:	8:00
Application Method:	Spray
Application Timing:	V2-V3
Application Placement:	BROFOL
Applied By:	JRK
Air Temperature, Unit:	60 F
% Relative Humidity:	70
Wind Velocity, Unit:	1 MPH
Wind Direction:	SW
Dew Presence (Y/N):	Y yes
Soil Temperature, Unit:	64 F
Soil Moisture:	BELNOR
% Cloud Cover:	95
Next Rain Occurred On:	6-4-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	V3
Stage Minimum, Percent:	V2
Stage Maximum, Percent:	V3
Height, Unit:	8 IN
Height Minimum, Maximum:	6 8

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMATA W DESC
Stage Majority, Percent:	8
Stage Minimum, Percent:	Coty
Stage Maximum, Percent:	12
Height, Unit:	4 IN
Height Minimum, Maximum:	0.5 8
Density, Unit:	10 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 12-DSO-ISApostTM
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-6-12 Injury Percent 4 DA-A	GLXMA 6-9-12 Injury Percent 7 DA-A	GLXMA 6-16-12 Injury Percent 14 DA-A	GLXMA 6-30-12 Injury Percent 28 DA-A	GLXMA 7-28-12 Injury Percent 56 DA-A
1	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	0 f	0 g	0 f	0 c	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
2	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	0 f	0 g	0 f	0 c	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	17 cd	16 de	14 b	4 ab	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	17 cd	20 bc	14 b	5 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	31 a	28 a	16 ab	4 ab	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	33 a	27 a	17 a	4 ab	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	11 e	12 f	10 cde	4 ab	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	18 c	20 bc	11 cd	4 ab	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	14 de	17 cd	11 cd	4 ab	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	18 cd	18 bcd	12 c	4 ab	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	14 de	13 ef	8 e	3 b	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	18 cd	15 def	9 de	5 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	18 c	18 bcd	11 cd	4 ab	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	23 b	21 b	12 c	4 ab	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 12-DSO-ISApostTM
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
Pest Code														
Crop Code										GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Rating Date										6-6-12	6-9-12	6-16-12	6-30-12	7-28-12
Rating Type										Injury	Injury	Injury	Injury	Injury
Rating Unit										Percent	Percent	Percent	Percent	Percent
Rating Timing														
Trt-Eval Interval										4 DA-A	7 DA-A	14 DA-A	28 DA-A	56 DA-A
15	NONTREATED									0 f	0 g	0 f	0 c	0 a
LSD (P=.05)										3.7	3.7	2.1	1.5	0.0
Standard Deviation										2.2	2.2	1.3	0.9	0.0
CV										14.44	14.71	13.02	27.13	0.0
Replicate F										5.188	0.863	0.014	1.492	0.000
Replicate Prob(F)										0.0121	0.4328	0.9860	0.2423	1.0000
Treatment F										58.723	49.159	58.631	12.016	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	1.0000

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 12-DSO-ISApostTM
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-6-12 Stunt Percent 4 DA-A	GLXMA 6-9-12 Stunt Percent 7 DA-A	GLXMA 6-16-12 Stunt Percent 14 DA-A	GLXMA 6-30-12 Stunt Percent 28 DA-A	GLXMA 7-28-12 Stunt Percent 56 DA-A
1	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	0 d	0 d	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
2	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	0 d	0 d	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	0 d	3 bc	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	0 d	4 bc	1 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	10 a	7 a	2 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	10 a	7 a	2 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	0 d	2 cd	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	3 c	4 bc	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	0 d	2 cd	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	3 c	2 cd	1 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	0 d	0 d	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	2 cd	1 cd	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	1 cd	1 cd	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	6 b	5 ab	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					

Southern Illinois University

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 12-DSO-ISApostTM
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
Pest Code														
Crop Code										GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Rating Date										6-6-12	6-9-12	6-16-12	6-30-12	7-28-12
Rating Type										Stunt	Stunt	Stunt	Stunt	Stunt
Rating Unit										Percent	Percent	Percent	Percent	Percent
Rating Timing														
Trt-Eval Interval										4 DA-A	7 DA-A	14 DA-A	28 DA-A	56 DA-A
15	NONTREATED									0 d	0 d	0 a	0 a	0 a
LSD (P=.05)										2.6	2.8	1.5	0.0	0.0
Standard Deviation										1.5	1.7	0.9	0.0	0.0
CV										67.67	67.95	231.46	0.0	0.0
Replicate F										1.729	0.101	0.000	0.000	0.000
Replicate Prob(F)										0.1959	0.9043	1.0000	1.0000	1.0000
Treatment F										16.117	6.257	1.900	0.000	0.000
Treatment Prob(F)										0.0001	0.0001	0.0722	1.0000	1.0000

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 12-DSO-ISApostTM
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-6-12 Chlorosis Percent 4 DA-A	GLXMA 6-9-12 Chlorosis Percent 7 DA-A	GLXMA 6-16-12 Chlorosis Percent 14 DA-A	GLXMA 6-30-12 Chlorosis Percent 28 DA-A	GLXMA 7-28-12 Chlorosis Percent 56 DA-A
1	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	0 a	0 a	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
2	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	0 a	0 a	0 a	0 a	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	0 a	0 a	0 a	0 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					

Southern Illinois University

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 12-DSO-ISApostTM
Location: De Soto, IL
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval									GLXMA 6-6-12 Chlorosis Percent 4 DA-A	GLXMA 6-9-12 Chlorosis Percent 7 DA-A	GLXMA 6-16-12 Chlorosis Percent 14 DA-A	GLXMA 6-30-12 Chlorosis Percent 28 DA-A	GLXMA 7-28-12 Chlorosis Percent 56 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
15	NONTREATED									0 a	0 a	0 a	0 a	0 a
LSD (P=.05)										0.0	0.0	0.0	0.0	0.0
Standard Deviation										0.0	0.0	0.0	0.0	0.0
CV										0.0	0.0	0.0	0.0	0.0
Replicate F										0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000	1.0000

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 12-DSO-ISApostTM
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-6-12 Necrosis Percent 4 DA-A	GLXMA 6-9-12 Necrosis Percent 7 DA-A	GLXMA 6-16-12 Necrosis Percent 14 DA-A	GLXMA 6-30-12 Necrosis Percent 28 DA-A	GLXMA 7-28-12 Necrosis Percent 56 DA-A
1	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	0 g	0 g	0 d	0 c	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
2	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	0 g	0 g	0 d	0 c	0 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	15 cde	11 ef	10 a	4 ab	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	15 cde	15 cd	9 ab	5 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	18 b	20 a	10 a	4 ab	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	22 a	19 ab	10 a	4 ab	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	10 f	9 f	7 c	4 ab	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	15 cde	14 cd	8 bc	4 ab	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	13 e	12 de	7 bc	4 ab	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	15 cde	14 cd	9 ab	4 ab	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	14 de	12 def	7 c	3 b	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	16 b-e	13 cde	7 c	5 a	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	17 bcd	16 bc	8 bc	4 ab	0 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	17 bc	13 de	9 ab	4 ab	0 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A					

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 12-DSO-ISApostTM
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
Pest Code														
Crop Code										GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Rating Date										6-6-12	6-9-12	6-16-12	6-30-12	7-28-12
Rating Type										Necrosis	Necrosis	Necrosis	Necrosis	Necrosis
Rating Unit										Percent	Percent	Percent	Percent	Percent
Rating Timing														
Trt-Eval Interval										4 DA-A	7 DA-A	14 DA-A	28 DA-A	56 DA-A
15	NONTREATED									0 g	0 g	0 d	0 c	0 a
LSD (P=.05)										2.7	3.2	1.7	1.5	0.0
Standard Deviation										1.6	1.9	1.0	0.9	0.0
CV										13.0	17.25	15.34	27.13	0.0
Replicate F										1.045	2.050	0.269	1.492	0.000
Replicate Prob(F)										0.3650	0.1476	0.7662	0.2423	1.0000
Treatment F										54.778	33.226	37.332	12.016	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	1.0000

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 12-DSO-ISApostTM
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 6-9-12 Control Percent 7 DA-A	AMATA-HR 6-16-12 Control Percent 14 DA-A	AMATA-HR 6-30-12 Control Percent 28 DA-A	AMATA-HR 7-28-12 Control Percent 56 DA-A
1	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A	33 e	57 f	50 g	40 d
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A				
2	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A	40 e	70 e	72 e	68 bc
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A				
3	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	87 b	88 bcd	78 cd	68 bc
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A				
4	COBRA	2	EC	0.094	lb ai/a	6	fl oz/a	V2-3	A	89 ab	90 abc	86 ab	79 ab
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A				
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	88 b	89 bcd	85 ab	73 ab
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A				
6	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	V2-3	A	95 a	95 a	90 a	79 ab
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A				
7	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	86 b	88 bcd	84 abc	67 bc
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A				
8	FLEXSTAR	1.88	EC	0.235	lb ai/a	1	pt/a	V2-3	A	88 b	90 abc	88 ab	82 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A				
9	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	89 ab	92 ab	87 ab	82 a
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A				
10	FLEXSTAR	1.88	EC	0.375	lb ai/a	1.6	pt/a	V2-3	A	91 ab	89 bcd	87 ab	83 a
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A				
11	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	72 d	75 e	65 f	60 c
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A				
12	CADET	0.91	EC	0.00427	lb ai/a	0.6	fl oz/a	V2-3	A	78 cd	83 d	82 bc	77 ab
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A				
13	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	89 ab	86 cd	75 de	68 bc
	ROUNDUP P-MAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A				
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	V2-3	A	86 bc	89 abc	87 ab	74 ab
	ROUNDUP P-MAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	V2-3	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-3	A				

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 12-DSO-ISApostTM
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
Pest Code										AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
Crop Code													
Rating Date										6-9-12	6-16-12	6-30-12	7-28-12
Rating Type										Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent
Rating Timing													
Trt-Eval Interval										7 DA-A	14 DA-A	28 DA-A	56 DA-A
15	NONTREATED									0 f	0 g	0 h	0 e
LSD (P=.05)										7.5	5.8	6.4	12.6
Standard Deviation										4.5	3.5	3.9	7.5
CV										6.03	4.4	5.19	11.27
Replicate F										1.070	5.506	3.440	1.219
Replicate Prob(F)										0.3565	0.0096	0.0461	0.3106
Treatment F										113.280	143.559	108.273	24.445
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Soybean Response to Glyphosate Tank-Mixtures: Weed Control.

Trial ID: 12-DSO-ISApostTM
Location: De Soto, IL
Investigator: Bryan Young

Trial Comments

1. Protocol: ISA.
2. Ratings: CI (overall, stunting, chlorosis, necrosis) at 4, 7, 14, 28, and 56 DAT.
   WC at 7, 14, 28, and 56 DAT.
3. Blanket EPP application of Roundup WeatherMax (22 floz/A) + 2,4-D LV4 (1 pt/A) + NPAK AMS (2.5 %v/v) was needed to control winter annual weeds, applied on 4-12-12.
   Blanket burndown of Gramoxone Inteon (4 pt/A) plus NIS (0.5%) was applied on 4-28-12.
4. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
5. Not harvested.

Southern Illinois University

Influence of Application Timing and Herbicide Rate on the Efficacy of Soil

Trial ID: 12-DSO-ISA-PPrateTime
Location: DeSoto, IL

Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-2-12

Trial Location

City: De Soto
State/Prov.: IL
Postal Code: 62924
Country: USA

Objectives:
Evaluate the application rate and timing of soil residual herbicides
in Roundup Ready soybeans.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG 4005 **Description:** RR
BBCH Scale: BSOY **Planting Date:** 4-29-12
Planting Method: SEEDED **Rate, Unit:** 165000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Pest 2 Type: W **Code:** GGGAN
Common Name: grasses, annual
Description: Mixture of PANDI and ECHCG

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 27 LB/A, P2O5 69 LB/A, K2O 90 LB/A

Soil Description

% Sand: 14 **% OM:** 2.12 **Texture:** SIL SILT LOAM
% Silt: 67 **pH:** 6.9 **Soil Name:** OKAW
% Clay: 19 **CEC:** 12.7

Additional Measured Elements

Element	Quantity	Unit
P1	112	LB/A
K	386	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

Southern Illinois University

Influence of Application Timing and Herbicide Rate on the Efficacy of Soil

Trial ID: 12-DSO-ISA-PPrateTime
Location: DeSoto, IL

Investigator: Bryan Young

Application Description

	A	B	C
Application Date:	4-2-12	4-17-12	4-29-12
Time of Day:	13:00	11:00	14:15
Application Method:	Spray	Spray	Spray
Application Timing:	28DBP	14DBP	0DBP
Application Placement:	BROSOI	BROSOI	BROSOI
Applied By:	LAH	RJW	JRK
Air Temperature, Unit:	89 F	70 F	84 F
% Relative Humidity:	45	52	59
Wind Velocity, Unit:	2 MPH	2 MPH	2 MPH
Wind Direction:	S	NE	N
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	72 F	63 F	70 F
Soil Moisture:	NORMAL	ABONOR	NORMAL
% Cloud Cover:	5	25	100
Next Rain Occurred On:	4-4-12	4-20-12	4-30-12

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	NA	NA

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	AMATA W DESC	AMATA W DESC	AMATA W DESC
Stage Majority, Percent:	NA	NA	NA
Pest 2 Code, Type, Scale:	GGGAN W DESC	GGGAN W DESC	GGGAN W DESC
Stage Majority, Percent:	NA	NA	NA

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Influence of Application Timing and Herbicide Rate on the Efficacy of Soil

Trial ID: 12-DSO-ISA-PPrateTime
Location: DeSoto, IL

Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-20-12 Injury Percent 3 WAP	GLXMA 6-10-12 Injury Percent 6 WAP	GLXMA 7-1-12 Injury Percent 9 WAP
1	NO RESIDUAL HERB							28DBP	A	0 c	0 a	0 a
2	VALOR XLT	40.3	WG	0.0756	lb ai/a	3.0	oz/a	28DBP	A	0 c	0 a	0 a
3	VALOR XLT	40.3	WG	0.101	lb ai/a	4.0	oz/a	28DBP	A	0 c	0 a	0 a
4	SONIC	70	WG	0.14	lb ai/a	3.2	oz/a	28DBP	A	0 c	0 a	0 a
5	SONIC	70	WG	0.282	lb ai/a	6.45	oz/a	28DBP	A	0 c	0 a	0 a
6	AUTHORITY XL	70	WG	0.175	lb ai/a	4.0	oz/a	28DBP	A	0 c	0 a	0 a
7	AUTHORITY XL	70	WG	0.328	lb ai/a	7.5	oz/a	28DBP	A	0 c	0 a	0 a
8	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	28DBP	A	0 c	0 a	0 a
9	SHARPEN PROWL H2O	2.85 3.8	SC CS	0.0223 1.19	lb ai/a lb ai/a	1.0 2.5	fl oz/a pt/a	28DBP 28DBP	A A	0 c	0 a	0 a
10	KIH-485	85	WG	0.133	lb ai/a	2.5	oz/a	28DBP	A	0 c	0 a	0 a
11	NO RESIDUAL HERB							14DBP	B	0 c	0 a	0 a
12	VALOR XLT	40.3	WG	0.0756	lb ai/a	3.0	oz/a	14DBP	B	0 c	0 a	0 a
13	VALOR XLT	40.3	WG	0.101	lb ai/a	4.0	oz/a	14DBP	B	0 c	0 a	0 a
14	SONIC	70	WG	0.14	lb ai/a	3.2	oz/a	14DBP	B	0 c	0 a	0 a
15	SONIC	70	WG	0.282	lb ai/a	6.45	oz/a	14DBP	B	0 c	0 a	0 a
16	AUTHORITY XL	70	WG	0.175	lb ai/a	4.0	oz/a	14DBP	B	0 c	0 a	0 a
17	AUTHORITY XL	70	WG	0.328	lb ai/a	7.5	oz/a	14DBP	B	0 c	0 a	0 a
18	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	14DBP	B	0 c	0 a	0 a
19	SHARPEN PROWL H2O	2.85 3.8	SC CS	0.0223 1.19	lb ai/a lb ai/a	1.0 2.5	fl oz/a pt/a	14DBP 14DBP	B B	0 c	0 a	0 a
20	KIH-485	85	WG	0.133	lb ai/a	2.5	oz/a	14DBP	B	0 c	0 a	0 a
21	NO RESIDUAL HERB							0DBP	C	0 c	0 a	0 a
22	VALOR XLT	40.3	WG	0.0756	lb ai/a	3.0	oz/a	0DBP	C	0 c	0 a	0 a
23	VALOR XLT	40.3	WG	0.101	lb ai/a	4.0	oz/a	0DBP	C	0 c	0 a	0 a
24	SONIC	70	WG	0.14	lb ai/a	3.2	oz/a	0DBP	C	0 c	0 a	0 a
25	SONIC	70	WG	0.282	lb ai/a	6.45	oz/a	0DBP	C	0 c	0 a	0 a
26	AUTHORITY XL	70	WG	0.175	lb ai/a	4.0	oz/a	0DBP	C	2 b	0 a	0 a

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Influence of Application Timing and Herbicide Rate on the Efficacy of Soil

Trial ID: 12-DSO-ISA-PPrateTime
Location: DeSoto, IL

Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-20-12 Injury Percent 3 WAP	GLXMA 6-10-12 Injury Percent 6 WAP	GLXMA 7-1-12 Injury Percent 9 WAP
27	AUTHORITY XL	70	WG	0.328	lb ai/a	7.5	oz/a	0DBP	C	2 b	0 a	0 a
28	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	0DBP	C	3 a	0 a	0 a
29	SHARPEN	2.85	SC	0.0223	lb ai/a	1.0	fl oz/a	0DBP	C	0 c	0 a	0 a
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	0DBP	C			
30	KIH-485	85	WG	0.133	lb ai/a	2.5	oz/a	0DBP	C	0 c	0 a	0 a
	LSD (P=.05)									1.5	0.0	0.0
	Standard Deviation									0.9	0.0	0.0
	CV									401.24	0.0	0.0
	Replicate F									2.446	0.000	0.000
	Replicate Prob(F)									0.0956	1.0000	1.0000
	Treatment F									1.976	0.000	0.000
	Treatment Prob(F)									0.0138	1.0000	1.0000

Influence of Application Timing and Herbicide Rate on the Efficacy of Soil

Trial ID: 12-DSO-ISA-PPrateTime
Location: DeSoto, IL

Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GGGAN 4-29-12 Control Percent 0 WAP	GGGAN 5-20-12 Control Percent 3 WAP	GGGAN 6-10-12 Control Percent 6 WAP	GGGAN 7-1-12 Control Percent 9 WAP
1	NO RESIDUAL HERB							28DBP	A	0 c	0 g	0 i	0 i
2	VALOR XLT	40.3	WG	0.0756	lb ai/a	3.0	oz/a	28DBP	A	99 a	94 ab	92 ab	91 a
3	VALOR XLT	40.3	WG	0.101	lb ai/a	4.0	oz/a	28DBP	A	97 ab	97 a	95 a	93 a
4	SONIC	70	WG	0.14	lb ai/a	3.2	oz/a	28DBP	A	89 b	82 cd	38 gh	35 gh
5	SONIC	70	WG	0.282	lb ai/a	6.45	oz/a	28DBP	A	94 ab	92 ab	78 bc	68 b-e
6	AUTHORITY XL	70	WG	0.175	lb ai/a	4.0	oz/a	28DBP	A	90 b	95 a	88 ab	80 a-d
7	AUTHORITY XL	70	WG	0.328	lb ai/a	7.5	oz/a	28DBP	A	99 a	97 a	95 a	94 a
8	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	28DBP	A	96 ab	63 f	23 h	13 hi
9	SHARPEN PROWL H2O	2.85 3.8	SC CS	0.0223 1.19	lb ai/a lb ai/a	1.0 2.5	fl oz/a pt/a	28DBP 28DBP	A A	98 a	73 de	30 h	30 gh
10	KIH-485	85	WG	0.133	lb ai/a	2.5	oz/a	28DBP	A	99 a	72 ef	53 fg	33 gh
11	NO RESIDUAL HERB							14DBP	B	0 c	0 g	0 i	0 i
12	VALOR XLT	40.3	WG	0.0756	lb ai/a	3.0	oz/a	14DBP	B	99 a	96 a	90 ab	81 a-d
13	VALOR XLT	40.3	WG	0.101	lb ai/a	4.0	oz/a	14DBP	B	99 a	94 ab	88 ab	77 a-d
14	SONIC	70	WG	0.14	lb ai/a	3.2	oz/a	14DBP	B	99 a	89 abc	60 ef	52 efg
15	SONIC	70	WG	0.282	lb ai/a	6.45	oz/a	14DBP	B	98 a	92 ab	91 ab	82 a-d
16	AUTHORITY XL	70	WG	0.175	lb ai/a	4.0	oz/a	14DBP	B	98 a	96 a	96 a	89 ab
17	AUTHORITY XL	70	WG	0.328	lb ai/a	7.5	oz/a	14DBP	B	99 a	97 a	97 a	96 a
18	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	14DBP	B	99 a	90 abc	70 cde	60 def
19	SHARPEN PROWL H2O	2.85 3.8	SC CS	0.0223 1.19	lb ai/a lb ai/a	1.0 2.5	fl oz/a pt/a	14DBP 14DBP	B B	98 a	89 abc	68 c-f	63 c-f
20	KIH-485	85	WG	0.133	lb ai/a	2.5	oz/a	14DBP	B	99 a	90 abc	62 def	47 efg
21	NO RESIDUAL HERB							0DBP	C		0 g	0 i	0 i
22	VALOR XLT	40.3	WG	0.0756	lb ai/a	3.0	oz/a	0DBP	C		95 a	87 ab	80 a-d
23	VALOR XLT	40.3	WG	0.101	lb ai/a	4.0	oz/a	0DBP	C		96 a	89 ab	85 abc
24	SONIC	70	WG	0.14	lb ai/a	3.2	oz/a	0DBP	C		91 ab	68 c-f	52 efg
25	SONIC	70	WG	0.282	lb ai/a	6.45	oz/a	0DBP	C		96 a	87 ab	82 a-d
26	AUTHORITY XL	70	WG	0.175	lb ai/a	4.0	oz/a	0DBP	C		94 ab	91 ab	88 ab

Southern Illinois University

Influence of Application Timing and Herbicide Rate on the Efficacy of Soil

Trial ID: 12-DSO-ISA-PPrateTime
Location: DeSoto, IL

Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GGGAN	GGGAN	GGGAN	GGGAN
	Pest Code									GGGAN	GGGAN	GGGAN	GGGAN
	Crop Code												
	Rating Date									4-29-12	5-20-12	6-10-12	7-1-12
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing												
	Trt-Eval Interval									0 WAP	3 WAP	6 WAP	9 WAP
27	AUTHORITY XL	70	WG	0.328	lb ai/a	7.5	oz/a	0DBP	C		96 a	95 a	94 a
28	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	0DBP	C		91 ab	57 ef	43 fg
29	SHARPEN	2.85	SC	0.0223	lb ai/a	1.0	fl oz/a	0DBP	C		85 bc	60 ef	50 efg
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	0DBP	C				
30	KIH-485	85	WG	0.133	lb ai/a	2.5	oz/a	0DBP	C		93 ab	77 bcd	62 def
	LSD (P=.05)									8.1	9.1	15.9	21.8
	Standard Deviation									4.9	5.6	9.7	13.4
	CV									5.62	6.84	14.43	22.06
	Replicate F									0.363	3.011	2.430	0.292
	Replicate Prob(F)									0.6981	0.0570	0.0969	0.7482
	Treatment F									112.021	79.920	29.129	15.220
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

Influence of Application Timing and Herbicide Rate on the Efficacy of Soil

Trial ID: 12-DSO-ISA-PPrateTime
Location: DeSoto, IL

Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval								AMATA-HR 4-29-12 Control Percent 0 WAP	AMATA-HR 5-20-12 Control Percent 3 WAP	AMATA-HR 6-10-12 Control Percent 6 WAP	AMATA-HR 7-1-12 Control Percent 9 WAP
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
1	NO RESIDUAL HERB							28DBP	A	0 c	0 i	0 l	0 n
2	VALOR XLT	40.3	WG	0.0756	lb ai/a	3.0	oz/a	28DBP	A	99 a	84 ef	62 ghi	40 l
3	VALOR XLT	40.3	WG	0.101	lb ai/a	4.0	oz/a	28DBP	A	99 a	86 ef	56 hi	45 kl
4	SONIC	70	WG	0.14	lb ai/a	3.2	oz/a	28DBP	A	99 a	80 f	52 ij	47 kl
5	SONIC	70	WG	0.282	lb ai/a	6.45	oz/a	28DBP	A	99 a	96 ab	89 abc	82 b-f
6	AUTHORITY XL	70	WG	0.175	lb ai/a	4.0	oz/a	28DBP	A	99 a	89 cde	70 efg	55 ijk
7	AUTHORITY XL	70	WG	0.328	lb ai/a	7.5	oz/a	28DBP	A	99 a	97 ab	92 ab	76 e-h
8	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	28DBP	A	99 a	81 f	52 ij	53 jk
9	SHARPEN PROWL H2O	2.85 3.8	SC CS	0.0223 1.19	lb ai/a lb ai/a	1.0 2.5	fl oz/a pt/a	28DBP 28DBP	A A	98 b	48 h	27 k	27 m
10	KIH-485	85	WG	0.133	lb ai/a	2.5	oz/a	28DBP	A	99 a	60 g	43 j	37 lm
11	NO RESIDUAL HERB							14DBP	B	0 c	0 i	0 l	0 n
12	VALOR XLT	40.3	WG	0.0756	lb ai/a	3.0	oz/a	14DBP	B	99 a	93 a-d	65 fgh	56 ijk
13	VALOR XLT	40.3	WG	0.101	lb ai/a	4.0	oz/a	14DBP	B	99 a	94 abc	76 def	67 ghi
14	SONIC	70	WG	0.14	lb ai/a	3.2	oz/a	14DBP	B	99 a	91 b-e	65 fgh	63 hij
15	SONIC	70	WG	0.282	lb ai/a	6.45	oz/a	14DBP	B	99 a	97 ab	88 abc	75 e-h
16	AUTHORITY XL	70	WG	0.175	lb ai/a	4.0	oz/a	14DBP	B	99 a	96 ab	91 ab	85 a-f
17	AUTHORITY XL	70	WG	0.328	lb ai/a	7.5	oz/a	14DBP	B	99 a	98 a	95 a	93 ab
18	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	14DBP	B	99 a	96 ab	88 abc	78 d-g
19	SHARPEN PROWL H2O	2.85 3.8	SC CS	0.0223 1.19	lb ai/a lb ai/a	1.0 2.5	fl oz/a pt/a	14DBP 14DBP	B B	99 a	87 def	67 fgh	60 ij
20	KIH-485	85	WG	0.133	lb ai/a	2.5	oz/a	14DBP	B	99 a	94 abc	82 bcd	73 fgh
21	NO RESIDUAL HERB							0DBP	C		0 i	0 l	0 n
22	VALOR XLT	40.3	WG	0.0756	lb ai/a	3.0	oz/a	0DBP	C		97 ab	89 abc	87 a-e
23	VALOR XLT	40.3	WG	0.101	lb ai/a	4.0	oz/a	0DBP	C		98 a	91 ab	89 a-d
24	SONIC	70	WG	0.14	lb ai/a	3.2	oz/a	0DBP	C		95 abc	78 cde	77 d-g
25	SONIC	70	WG	0.282	lb ai/a	6.45	oz/a	0DBP	C		99 a	95 a	92 abc
26	AUTHORITY XL	70	WG	0.175	lb ai/a	4.0	oz/a	0DBP	C		97 ab	94 a	92 abc

Southern Illinois University

Influence of Application Timing and Herbicide Rate on the Efficacy of Soil

Trial ID: 12-DSO-ISA-PPrateTime
Location: DeSoto, IL

Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
	Pest Code									AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
	Crop Code												
	Rating Date									4-29-12	5-20-12	6-10-12	7-1-12
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing												
	Trt-Eval Interval									0 WAP	3 WAP	6 WAP	9 WAP
27	AUTHORITY XL	70	WG	0.328	lb ai/a	7.5	oz/a	0DBP	C		99 a	97 a	97 a
28	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	0DBP	C		98 a	94 a	93 ab
29	SHARPEN	2.85	SC	0.0223	lb ai/a	1.0	fl oz/a	0DBP	C		95 abc	82 bcd	80 c-f
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	0DBP	C				
30	KIH-485	85	WG	0.133	lb ai/a	2.5	oz/a	0DBP	C		96 ab	91 ab	87 a-e
	LSD (P=.05)									0.9	6.7	11.1	12.7
	Standard Deviation									0.6	4.1	6.8	7.8
	CV									0.62	5.03	9.89	12.25
	Replicate F									1.688	1.925	0.080	0.179
	Replicate Prob(F)									0.1985	0.1551	0.9231	0.8362
	Treatment F									9076.044	158.961	55.476	40.515
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Influence of Application Timing and Herbicide Rate on the Efficacy of Soil

Trial ID: 12-DSO-ISA-PPrateTime
Location: DeSoto, IL

Investigator: Bryan Young

Trial Comments

1. Protocol: ISA.
2. Ratings: CI/WC at 0, 3, 6, and 9 WAP. Photos at all evaluation timings. This study is NOT yielded. Describe crop injury symptoms and rate seperately (chlorosis, necrosis, stunting) if severe enough.
3. Plot area should be no-till and have a blanket burndown at 28 DBP on the entire site.
   Blanket application of Intimidator Plus (1.5 qt/) plus 2,4-D LV4 (1 pt/A) plus AMS (17 lb/100 gal) was applied on 4-2-12.
   If weeds are present in plots receiving the B+C applications, a foliar burndown herbicide should also be used (10 ft wide).
   Blanket trial area with glyphosate plus AMS after the 9 WAP evaluation if needed.
4. Rainfall following the 28DBP application was approximately 0.7 inch over the next two days and an additional 0.98 inch within the next 14 days.
   Rainfall following the 14DBP application was approximately 0.27 inch with 5 days and an additional 0.6 inch within the next 14 days.
   Rainfall following the 0DBP application was approximately 0.5 inch the next day and an additional 0.25 inch 7 days later.
5. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
   GGGAN = Annual grasses including PANDI (fall panicum) and ECHCG (barnyardgrass).
6. Not harvested.

Southern Illinois University

Residual Tank-Mix Partners in Soybean.

Trial ID: 12-DSO-ISA-ResTM
Location: De Soto, IL
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-29-12

Trial Location

City: De Soto
State/Prov.: IL
Postal Code: 62924
Country: USA

Objectives:
Evaluate glyphosate-resistant waterhemp control with residual herbicide tank-mixtures.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG 4005 **Description:** RR
BBCH Scale: BSOY **Planting Date:** 4-29-12
Planting Method: SEEDED Seeded **Rate, Unit:** 165000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMX	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 27 LB/A, P2O5 69 LB/A, K2O 90 LB/A

Soil Description

% Sand: 14 **% OM:** 2.12 **Texture:** SIL SILT LOAM
% Silt: 67 **pH:** 6.9 **Soil Name:** OKAW
% Clay: 19 **CEC:** 12.7

Additional Measured Elements

Element	Quantity	Unit
P1	112	LB/A
K	386	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

Residual Tank-Mix Partners in Soybean.

Trial ID: 12-DSO-ISA-ResTM
Location: De Soto, IL
Investigator: Bryan Young

Application Description

	A
Application Date:	4-29-12
Time of Day:	13:00
Application Method:	Spray
Application Timing:	0-7DBP
Application Placement:	BROFOL
Applied By:	LAH
Air Temperature, Unit:	82 F
% Relative Humidity:	52
Wind Velocity, Unit:	2 MPH
Wind Direction:	NE
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	73 F
Soil Moisture:	NORMAL
% Cloud Cover:	100
Next Rain Occurred On:	4-30-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMATA W DESC
Stage Majority, Percent:	NA

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

Residual Tank-Mix Partners in Soybean.

Trial ID: 12-DSO-ISA-ResTM
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-21-12 Plants 000/A 3 WAP	GLXMA 5-20-12 Injury Percent 3 WAP	GLXMA 6-10-12 Injury Percent 6 WAP	GLXMA 6-28-12 Injury Percent 9 WAP	GLXMA 5-20-12 Stunt Percent 3 WAP	GLXMA 6-10-12 Stunt Percent 6 WAP	GLXMA 6-28-12 Stunt Percent 9 WAP
1	SPARTAN SC	4	SC	0.125	lb ai/a	4	fl oz/a	0-7DBP	A	118.6 a	3 c-f	0 a	0 a	3 a-d	0 a	0 a
2	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	124.0 a	3 c-f	0 a	0 a	3 a-d	0 a	0 a
3	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	0-7DBP	A	136.3 a	0 f	0 a	0 a	0 d	0 a	0 a
4	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	145.2 a	6 ab	0 a	0 a	5 a	0 a	0 a
5	SPARTAN SC	4	SC	0.125	lb ai/a	4	fl oz/a	0-7DBP	A	128.4 a	0 f	0 a	0 a	0 d	0 a	0 a
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	0-7DBP	A							
6	SPARTAN SC	4	SC	0.125	lb ai/a	4	fl oz/a	0-7DBP	A	134.6 a	4 bcd	0 a	0 a	2 bcd	0 a	0 a
	BOUNDARY	6.5	EC	1.7	lb ai/a	2.1	pt/a	0-7DBP	A							
7	SPARTAN SC	4	SC	0.125	lb ai/a	4	fl oz/a	0-7DBP	A	130.1 a	2 def	0 a	0 a	2 bcd	0 a	0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	0-7DBP	A							
8	SPARTAN SC	4	SC	0.125	lb ai/a	4	fl oz/a	0-7DBP	A	131.9 a	1 ef	0 a	0 a	1 cd	0 a	0 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1.0	fl oz/a	0-7DBP	A							
9	SPARTAN SC	4	SC	0.125	lb ai/a	4	fl oz/a	0-7DBP	A	131.9 a	0 f	0 a	0 a	0 d	0 a	0 a
	KIH-485	85	WG	0.106	lb ai/a	2	oz/a	0-7DBP	A							
10	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	131.9 a	0 f	0 a	0 a	0 d	0 a	0 a
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	0-7DBP	A							
11	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	111.6 a	4 b-e	0 a	0 a	2 bcd	0 a	0 a
	BOUNDARY	6.5	EC	1.7	lb ai/a	2.1	pt/a	0-7DBP	A							
12	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	130.1 a	5 bc	0 a	0 a	4 ab	0 a	0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	0-7DBP	A							
13	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	118.6 a	4 bcd	0 a	0 a	4 ab	0 a	0 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	0-7DBP	A							
14	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	132.8 a	4 b-e	0 a	0 a	4 abc	0 a	0 a
	KIH-485	85	WG	0.106	lb ai/a	2	oz/a	0-7DBP	A							
15	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	0-7DBP	A	141.7 a	1 ef	0 a	0 a	1 cd	0 a	0 a
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	0-7DBP	A							
16	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	0-7DBP	A	131.9 a	6 ab	0 a	0 a	3 a-d	0 a	0 a
	BOUNDARY	6.5	EC	1.7	lb ai/a	2.1	pt/a	0-7DBP	A							
17	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	0-7DBP	A	125.7 a	6 ab	0 a	0 a	3 abc	0 a	0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	0-7DBP	A							
18	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	0-7DBP	A	124.0 a	4 b-e	0 a	0 a	4 abc	0 a	0 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1.0	fl oz/a	0-7DBP	A							
19	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	0-7DBP	A	124.0 a	0 f	0 a	0 a	0 d	0 a	0 a
	KIH-485	85	WG	0.106	lb ai/a	2	oz/a	0-7DBP	A							
20	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	127.5 a	1 ef	0 a	0 a	1 cd	0 a	0 a
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	0-7DBP	A							

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Residual Tank-Mix Partners in Soybean.

Trial ID: 12-DSO-ISA-ResTM
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-21-12 Plants 000/A 3 WAP	GLXMA 5-20-12 Injury Percent 3 WAP	GLXMA 6-10-12 Injury Percent 6 WAP	GLXMA 6-28-12 Injury Percent 9 WAP	GLXMA 5-20-12 Stunt Percent 3 WAP	GLXMA 6-10-12 Stunt Percent 6 WAP	GLXMA 6-28-12 Stunt Percent 9 WAP
21	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	119.5 a	8 a	0 a	0 a	4 abc	0 a	0 a
	BOUNDARY	6.5	EC	1.7	lb ai/a	2.1	pt/a	0-7DBP	A							
22	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	132.8 a	6 ab	0 a	0 a	1 cd	0 a	0 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	0-7DBP	A							
23	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	121.3 a	4 b-e	0 a	0 a	4 abc	0 a	0 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	0-7DBP	A							
24	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	137.2 a	0 f	0 a	0 a	0 d	0 a	0 a
	KIH-485	85	WG	0.106	lb ai/a	2	oz/a	0-7DBP	A							
25	NONTREATED									134.6 a	0 f	0 a	0 a	0 d	0 a	0 a
LSD (P=.05)										19.96	2.9	0.0	0.0	2.9	0.0	0.0
Standard Deviation										12.09	1.7	0.0	0.0	1.8	0.0	0.0
CV										9.37	61.5	0.0	0.0	90.27	0.0	0.0
Replicate F										1.369	2.255	0.000	0.000	1.214	0.000	0.000
Replicate Prob(F)										0.2641	0.1159	1.0000	1.0000	0.3058	1.0000	1.0000
Treatment F										1.222	6.096	0.000	0.000	2.573	0.000	0.000
Treatment Prob(F)										0.2713	0.0001	1.0000	1.0000	0.0026	1.0000	1.0000

Residual Tank-Mix Partners in Soybean.

Trial ID: 12-DSO-ISA-ResTM
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-20-12 Necrosis Percent 3 WAP	GLXMA 6-10-12 Necrosis Percent 6 WAP	GLXMA 6-28-12 Necrosis Percent 9 WAP	AMATA-HR 5-20-12 Control Percent 3 WAP	AMATA-HR 6-10-12 Control Percent 6 WAP	AMATA-HR 6-28-12 Control Percent 9 WAP
1	SPARTAN SC	4	SC	0.125	lb ai/a	4	fl oz/a	0-7DBP	A	0 a	0 a	0 a	98 a	90 fg	73 gh
2	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	0 a	0 a	0 a	99 a	95 a-d	89 a-d
3	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	0-7DBP	A	0 a	0 a	0 a	97 b	82 h	67 h
4	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	0 a	0 a	0 a	99 a	92 c-g	78 efg
5	SPARTAN SC	4	SC	0.125	lb ai/a	4	fl oz/a	0-7DBP	A	0 a	0 a	0 a	98 a	95 a-d	85 c-f
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	0-7DBP	A						
6	SPARTAN SC	4	SC	0.125	lb ai/a	4	fl oz/a	0-7DBP	A	0 a	0 a	0 a	99 a	97 ab	90 a-d
	BOUNDARY	6.5	EC	1.7	lb ai/a	2.1	pt/a	0-7DBP	A						
7	SPARTAN SC	4	SC	0.125	lb ai/a	4	fl oz/a	0-7DBP	A	0 a	0 a	0 a	99 a	98 a	96 ab
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	0-7DBP	A						
8	SPARTAN SC	4	SC	0.125	lb ai/a	4	fl oz/a	0-7DBP	A	0 a	0 a	0 a	99 a	90 efg	72 gh
	SHARPEN	2.85	SC	0.0223	lb ai/a	1.0	fl oz/a	0-7DBP	A						
9	SPARTAN SC	4	SC	0.125	lb ai/a	4	fl oz/a	0-7DBP	A	0 a	0 a	0 a	99 a	96 ab	88 a-e
	KIH-485	85	WG	0.106	lb ai/a	2	oz/a	0-7DBP	A						
10	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	0 a	0 a	0 a	99 a	96 abc	92 abc
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	0-7DBP	A						
11	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	0 a	0 a	0 a	99 a	97 ab	97 a
	BOUNDARY	6.5	EC	1.7	lb ai/a	2.1	pt/a	0-7DBP	A						
12	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	0 a	0 a	0 a	99 a	98 a	97 a
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	0-7DBP	A						
13	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	0 a	0 a	0 a	99 a	97 ab	95 abc
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	0-7DBP	A						
14	SPARTAN SC	4	SC	0.25	lb ai/a	8	fl oz/a	0-7DBP	A	0 a	0 a	0 a	99 a	97 ab	95 abc
	KIH-485	85	WG	0.106	lb ai/a	2	oz/a	0-7DBP	A						
15	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	0-7DBP	A	0 a	0 a	0 a	99 a	95 a-d	91 a-d
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	0-7DBP	A						
16	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	0-7DBP	A	0 a	0 a	0 a	99 a	96 ab	90 a-d
	BOUNDARY	6.5	EC	1.7	lb ai/a	2.1	pt/a	0-7DBP	A						
17	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	0-7DBP	A	0 a	0 a	0 a	99 a	96 abc	88 a-e
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	0-7DBP	A						
18	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	0-7DBP	A	0 a	0 a	0 a	98 a	93 b-f	82 d-g
	SHARPEN	2.85	SC	0.0223	lb ai/a	1.0	fl oz/a	0-7DBP	A						
19	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	0-7DBP	A	0 a	0 a	0 a	99 a	95 a-d	87 a-e
	KIH-485	85	WG	0.106	lb ai/a	2	oz/a	0-7DBP	A						
20	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	0 a	0 a	0 a	99 a	91 d-g	77 fgh
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	0-7DBP	A						

Residual Tank-Mix Partners in Soybean.

Trial ID: 12-DSO-ISA-ResTM
Location: De Soto, IL
Investigator: Bryan Young

Pest Code														
Crop Code									GLXMA	GLXMA	GLXMA	AMATA-HR	AMATA-HR	AMATA-HR
Rating Date									5-20-12	6-10-12	6-28-12	5-20-12	6-10-12	6-28-12
Rating Type									Necrosis	Necrosis	Necrosis	Control	Control	Control
Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing														
Trt-Eval Interval									3 WAP	6 WAP	9 WAP	3 WAP	6 WAP	9 WAP
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
21	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	0 a	0 a	0 a	99 a	96 ab	91 a-d
	BOUNDARY	6.5	EC	1.7	lb ai/a	2.1	pt/a	0-7DBP	A						
22	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	0 a	0 a	0 a	99 a	97 ab	94 abc
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	0-7DBP	A						
23	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	0 a	0 a	0 a	99 a	88 g	77 fgh
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	0-7DBP	A						
24	VALOR SX	51	WG	0.08	lb ai/a	2.5	oz/a	0-7DBP	A	0 a	0 a	0 a	99 a	94 a-e	86 b-f
	KIH-485	85	WG	0.106	lb ai/a	2	oz/a	0-7DBP	A						
25	NONTREATED									0 a	0 a	0 a	0 c	0 i	0 i
LSD (P=.05)										0.0	0.0	0.0	1.0	4.2	10.2
Standard Deviation										0.0	0.0	0.0	0.6	2.6	6.2
CV										0.0	0.0	0.0	0.61	2.82	7.45
Replicate F										0.000	0.000	0.000	1.957	0.393	1.048
Replicate Prob(F)										1.0000	1.0000	1.0000	0.1524	0.6774	0.3586
Treatment F										0.000	0.000	0.000	3510.406	169.910	28.983
Treatment Prob(F)										1.0000	1.0000	1.0000	0.0001	0.0001	0.0001

Southern Illinois University

Residual Tank-Mix Partners in Soybean.

Trial ID: 12-DSO-ISA-ResTM
Location: De Soto, IL
Investigator: Bryan Young

Trial Comments

1. Protocol: ISA.
2. Ratings: CI/WC at 3, 6, and 9 WAP.
   Rate components of CI separately: stunting, necrosis, overall injury.
   Determine soybean population (count plants in 1 meter of row at 2 locations in each plot) at 3 WAP.
   Photos at all evaluation timings. This study is NOT yielded.
3. Plot area was no-till and had a blanket burndown of Roundup PowerMax (22 floz/A) + 2,4-D (1 pt/A) over the entire site on 4-12-12.
   Blanket burndown of Gramoxone Inteon (4 pt/A) plus NIS (0.5%) was applied on 4-28-12.
   Blanket trial area with glyphosate after the 9 WAP evaluation if needed.
4. Rainfall following the 0-7DBP application was approximately 0.5 inch the next day and an additional 0.25 inch 7 days later.
5. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
6. Not harvested.

Southern Illinois University

General Evaluation of Soil Residual Herbicides in Soybean.

Trial ID: 12-DSO-Residual
Location: De Soto, IL
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-29-12

Trial Location

City: De Soto
State/Prov.: IL
Postal Code: 62924
Country: USA

Objectives:
Determine which herbicide for use in soybean has the greatest level of residual waterhemp control.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 4-29-12
Planting Method: SEEDED Seeded **Rate, Unit:** 155000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 27 LB/A, P2O5 69 LB/A, K2O 90 LB/A

Soil Description

% Sand: 15.4 **% OM:** 2.15 **Texture:** SIL SILT LOAM
% Silt: 64.7 **pH:** 6.9 **Soil Name:** OKAW
% Clay: 19.9 **CEC:** 12.4

Additional Measured Elements

Element	Quantity	Unit
P1	94	LB/A
K	468	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

Southern Illinois University

General Evaluation of Soil Residual Herbicides in Soybean.

Trial ID: 12-DSO-Residual
Location: De Soto, IL

Investigator: Bryan Young

Application Description

	A
Application Date:	4-29-12
Time of Day:	16:00
Application Method:	Spray
Application Timing:	PRE
Application Placement:	BROFOL
Applied By:	LAH
Air Temperature, Unit:	80 F
% Relative Humidity:	59
Wind Velocity, Unit:	2 MPH
Wind Direction:	N
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	70 F
Soil Moisture:	NORMAL
% Cloud Cover:	100
Next Rain Occurred On:	4-30-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMATA W DESC
Stage Majority, Percent:	NA

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

General Evaluation of Soil Residual Herbicides in Soybean.

Trial ID: 12-DSO-Residual
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-13-12 Injury Percent 14 DA-A	GLXMA 5-27-12 Injury Percent 28 DA-A	GLXMA 6-24-12 Injury Percent 56 DA-A	AMATA-HR 5-13-12 Control Percent 14 DA-A	AMATA-HR 5-27-12 Control Percent 28 DA-A	AMATA-HR 6-24-12 Control Percent 56 DA-A
1	NONTREATED									0 a	0 a	0 a	0 b	0 f	0 f
2	SONIC	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	0 a	0 a	0 a	99 a	97 a	95 a
3	ENVIVE	41.3	WG	0.129	lb ai/a	5	oz/a	PRE	A	0 a	0 a	0 a	99 a	94 bc	68 cd
4	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	PRE	A	0 a	0 a	0 a	99 a	89 d	68 d
5	FIERCE	76	WG	0.214	lb ai/a	4.5	oz/a	PRE	A	0 a	0 a	0 a	99 a	97 ab	86 b
6	ZIDUA	85	WG	0.133	lb ai/a	2.5	oz/a	PRE	A	0 a	0 a	0 a	99 a	96 ab	76 c
7	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A	0 a	0 a	0 a	99 a	97 ab	93 ab
8	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	0 a	0 a	0 a	99 a	86 e	55 e
9	MATADOR	4.7	SC	1.59	lb ai/a	2.7	pt/a	PRE	A	0 a	2 a	0 a	99 a	92 cd	68 d
10	VERDICT	5.57	EC	0.218	lb ai/a	5	oz/a	PRE	A	0 a	0 a	0 a	99 a	90 d	63 d
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A						
11	LINEX	4	SC	1	lb ai/a	2	pt/a	PRE	A	0 a	0 a	0 a	99 a	92 cd	64 d
12	NONTREATED									0 a	0 a	0 a	0 b	0 f	0 f
LSD (P=.05)										0.0	1.4	0.0	0.0	3.5	7.7
Standard Deviation										0.0	0.8	0.0	0.0	2.1	4.5
CV										0.0	600.0	0.0	0.0	2.69	7.4
Replicate F										0.000	1.000	0.000	0.000	3.283	0.414
Replicate Prob(F)										1.0000	0.3840	1.0000	1.0000	0.0565	0.6659
Treatment F										0.000	1.000	0.000	0.000	914.325	141.197
Treatment Prob(F)										1.0000	0.4767	1.0000	1.0000	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

General Evaluation of Soil Residual Herbicides in Soybean.

Trial ID: 12-DSO-Residual
Location: De Soto, IL
Investigator: Bryan Young

Trial Comments

1. Protocol: SIU (BGY).
2. Ratings: CI at 14 DAT; CI/WC at 28 and 56 DAT.
3. Blanket application of Roundup Powermax (44 floz/A) at 56 DAT, to all plots 10 ft wide.
4. No yield.
5. Blanket burndown of Gramoxone Inteon (4 pt/A) plus NIS (0.5%) was applied on 4-28-12.
6. Rainfall following the PRE application was approximately 0.5 inch the next day and an additional 0.25 inch 7 days later.
7. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
8. Not harvested.

Southern Illinois University

Anthem Preemergence and Postemergence in Corn - Site 1.

Trial ID: 12-DSO-AnthemCN
Location: De Soto, IL
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-29-12

Trial Location

City: De Soto
State/Prov.: IL
Postal Code: 62924
Country: USA

Objectives:
Evaluate glyphosate-resistant waterhemp control from Anthem compared with competitive standards in corn.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 61-06 **Description:** RR2/LL
BBCH Scale: BCOR **Planting Date:** 4-29-12
Planting Method: SEEDED Seeded **Rate, Unit:** 31000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 177 LB/A, P2O5 69 LB/A, K2O 90 LB/A

Soil Description

% Sand: 15.4 **% OM:** 2.15 **Texture:** SIL SILT LOAM
% Silt: 64.7 **pH:** 6.9 **Soil Name:** OKAW
% Clay: 19.9 **CEC:** 12.4

Additional Measured Elements

Element	Quantity	Unit
P1	94	LB/A
K	468	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

Anthem Preemergence and Postemergence in Corn - Site 1.

Trial ID: 12-DSO-AnthemCN
Location: De Soto, IL
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-10-12					7	DAY	30.1	79.2	F
2.	4-13-12	0.22	IN	RAIN	rain					
3.	4-15-12	0.47	IN	RAIN	rain					
4.	4-16-12	0.29	IN	RAIN	rain					
5.	4-17-12					7	DAY	36.7	75.6	F
6.	4-20-12	0.13	IN	RAIN	rain					
7.	4-22-12	0.13	IN	RAIN	rain					
8.	4-24-12					7	DAY	43.7	80.9	F
9.	4-27-12	0.04	IN	RAIN	rain					
10.	4-30-12	0.55	IN	RAIN	rain					
11.	5-1-12					7	DAY	59.1	91.3	F
12.	5-6-12	0.14	IN	RAIN	rain					
13.	5-7-12	0.07	IN	RAIN	rain					
14.	5-8-12					7	DAY	43.3	79	F
15.	5-15-12					7	DAY	44.9	89.1	F
16.	5-20-12	0.93	IN	RAIN	rain					
17.	5-22-12					7	DAY	45.5	92.8	F
18.	5-29-12					7	DAY	46.3	89.8	F
19.	5-30-12	0.02	IN	RAIN	rain					
20.	5-31-12	0.14	IN	RAIN	rain					
21.	6-4-12	0.49	IN	RAIN	rain					
22.	6-5-12					7	DAY	48.5	88.8	F
23.	6-11-12	0.21	IN	RAIN	rain					
24.	6-12-12					7	DAY	49.8	91.1	F
25.	6-17-12	0.03	IN	RAIN	rain					
26.	6-19-12					7	DAY	55.4	96.4	F
27.	6-26-12					7	DAY	51.1	105.4	F
28.	7-3-12					7	DAY	71.1	105	F
29.	7-8-12	0.07	IN	RAIN	rain					
30.	7-9-12	0.12	IN	RAIN	rain					
31.	7-10-12					7	DAY	65.9	93.9	F
32.	7-14-12	0.02	IN	RAIN	rain					
33.	7-17-12					7	DAY	60	102.3	F
34.	7-17-12	0.03	IN	RAIN	rain					
35.	7-24-12					7	DAY	64.1	102.1	F
36.	7-26-12	1.41	IN	RAIN	rain					
37.	7-29-12	0.24	IN	RAIN	rain					
38.	7-31-12					7	DAY	62.7	97.9	F
39.	8-2-12	0.08	IN	RAIN	rain					
40.	8-4-12	3.29	IN	RAIN	rain					
41.	8-5-12	0.21	IN	RAIN	rain					
42.	8-7-12					7	DAY	54.1	97.2	F

Anthem Preemergence and Postemergence in Corn - Site 1.

Trial ID: 12-DSO-AnthemCN
Location: De Soto, IL
Investigator: Bryan Young

Application Description

	A	B	C
Application Date:	4-29-12	5-12-12	5-29-12
Time of Day:	11:00	9:30	15:30
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	V2-V3	POST
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	LAH	RJW	RJW
Air Temperature, Unit:	79 F	78 F	95 F
% Relative Humidity:	60	46	27
Wind Velocity, Unit:	1 MPH	1 MPH	2 MPH
Wind Direction:	NE	E	E
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	69 F	65 F	93 F
Soil Moisture:	NORMAL	NORMAL	NORMAL
% Cloud Cover:	100	100	10
Next Rain Occurred On:	4-30-12	5-20-12	5-31-12

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	ZEAMD BCOR	ZEAMD BCOR	ZEAMD BCOR
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	V3	V6
Stage Minimum, Percent:		V2	V5
Stage Maximum, Percent:		V3	V6
Height, Unit:		5 IN	24 IN
Height Minimum, Maximum:		3 5	18 28

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	AMATA W DESC	AMATA W DESC	AMATA W DESC
Stage Majority, Percent:	NA	4	20
Stage Minimum, Percent:		2	1
Stage Maximum, Percent:		6	25
Height, Unit:		0.25 IN	5 IN
Height Minimum, Maximum:		0.25 0.5	4 15
Density, Unit:		10 FT2	0.1 FT2

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Anthem Preemergence and Postemergence in Corn - Site 1.

Trial ID: 12-DSO-AnthemCN
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 9-24-12 Moisture Percent	ZEAMD 9-24-12 Yield bu/A
1	ANTHEM	2.15	SE	0.168	lb ai/a	10	fl oz/a	PRE	A	18.9 a	31 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	C		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	C		
2	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	16.3 a	32 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	C		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	C		
3	ANTHEM	2.15	SE	0.168	lb ai/a	10	fl oz/a	PRE	A	16.2 a	36 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C		
4	HARNESS	7	EC	2.36	lb ai/a	2.7	pt/a	PRE	A	16.3 a	29 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C		
5	DUAL II MAGNUM	7.64	EC	1.6	lb ai/a	1.67	pt/a	PRE	A	16.1 a	40 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C		
6	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	16.0 a	34 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C		
7	BICEP LITE II MAGNUM	6	SC	2.25	lb ai/a	1.5	qt/a	PRE	A	18.5 a	36 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C		
8	HARNESS XTRA	6	EC	3.45	lb ai/a	2.3	qt/a	PRE	A	17.1 a	31 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C		
9	ZEMAX	3.67	SC	2.2	lb ai/a	2.4	qt/a	PRE	A	15.4 a	38 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C		
10	VERDICT	5.57	EC	0.696	lb ai/a	16	fl oz/a	PRE	A	14.7 a	29 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C		
11	ANTHEM	2.15	SE	0.151	lb ai/a	9	fl oz/a	V2-V3	B	17.4 a	37 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B		
12	ANTHEM ATZ	4.5	SE	0.98	lb ai/a	28	fl oz/a	V2-V3	B	15.6 a	37 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B		
13	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	V2-V3	B	15.7 a	38 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2-V3	B		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B		
14	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V2-V3	B	15.5 a	30 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B		
15	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B	14.9 a	37 a
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B		

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Anthem Preemergence and Postemergence in Corn - Site 1.

Trial ID: 12-DSO-AnthemCN
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 9-24-12 Moisture Percent	ZEAMD 9-24-12 Yield bu/A
	Pest Code										
	Crop Code										
	Rating Date										
	Rating Type										
	Rating Unit										
	Rating Timing										
	Trt-Eval Interval										
16	ANTHEM	2.15	SE	0.151	lb ai/a	9	fl oz/a	V2-V3	B	16.1 a	38 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B		
	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	V2-V3	B		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B		
	LSD (P=.05)									2.61	11.4
	Standard Deviation									1.83	8.0
	CV									11.21	23.07
	Replicate F									2.005	6.927
	Replicate Prob(F)									0.1267	0.0006
	Treatment F									1.676	0.859
	Treatment Prob(F)									0.0915	0.6108

Anthem Preemergence and Postemergence in Corn - Site 1.

Trial ID: 12-DSO-AnthemCN
Location: De Soto, IL
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval								ZEAMD 5-17-12 Injury Percent 14 DAE 5 DA-B	ZEAMD 5-26-12 Injury Percent 14 DA-B	ZEAMD 6-2-12 Injury Percent 30 DAE 4 DA-C	ZEAMD 6-11-12 Injury Percent 13 DA-C 30 DA-B	ZEAMD 6-28-12 Injury Percent 60 DA-A	ZEAMD 7-28-12 Injury Percent 90 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	ANTHEM	2.15	SE	0.168	lb ai/a	10	fl oz/a	PRE	A	0 c	0 c	0 c	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	C						
2	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	0 c	0 c	0 c	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	C						
3	ANTHEM	2.15	SE	0.168	lb ai/a	10	fl oz/a	PRE	A	0 c	0 c	0 c	0 a	0 a	0 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C						
4	HARNESS	7	EC	2.36	lb ai/a	2.7	pt/a	PRE	A	0 c	0 c	0 c	0 a	0 a	0 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C						
5	DUAL II MAGNUM	7.64	EC	1.6	lb ai/a	1.67	pt/a	PRE	A	0 c	0 c	0 c	0 a	0 a	0 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C						
6	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	0 c	0 c	0 c	0 a	0 a	0 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C						
7	BICEP LITE II MAGNUM	6	SC	2.25	lb ai/a	1.5	qt/a	PRE	A	0 c	0 c	0 c	0 a	0 a	0 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C						
8	HARNESS XTRA	6	EC	3.45	lb ai/a	2.3	qt/a	PRE	A	0 c	0 c	0 c	0 a	0 a	0 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C						
9	ZEMAX	3.67	SC	2.2	lb ai/a	2.4	qt/a	PRE	A	0 c	0 c	0 c	0 a	0 a	0 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C						
10	VERDICT	5.57	EC	0.696	lb ai/a	16	fl oz/a	PRE	A	0 c	0 c	0 c	0 a	0 a	0 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C						
11	ANTHEM	2.15	SE	0.151	lb ai/a	9	fl oz/a	V2-V3	B	15 a	7 a	4 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B						
12	ANTHEM ATZ	4.5	SE	0.98	lb ai/a	28	fl oz/a	V2-V3	B	6 b	5 b	2 b	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B						
13	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	V2-V3	B	0 c	0 c	0 c	0 a	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2-V3	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B						
14	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V2-V3	B	0 c	0 c	0 c	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B						
15	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B	0 c	0 c	0 c	0 a	0 a	0 a
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B						

Anthem Preemergence and Postemergence in Corn - Site 1.

Trial ID: 12-DSO-AnthemCN
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 5-17-12 Injury Percent 14 DAE 5 DA-B	ZEAMD 5-26-12 Injury Percent 14 DA-B	ZEAMD 6-2-12 Injury Percent 30 DAE 4 DA-C	ZEAMD 6-11-12 Injury Percent 13 DA-C 30 DA-B	ZEAMD 6-28-12 Injury Percent 60 DA-A	ZEAMD 7-28-12 Injury Percent 90 DA-A
16	ANTHEM	2.15	SE	0.151	lb ai/a	9	fl oz/a	V2-V3	B	6 b	4 b	2 b	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B						
	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	V2-V3	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B						
LSD (P=.05)										1.2	0.5	0.6	0.0	0.0	0.0
Standard Deviation										0.9	0.4	0.4	0.0	0.0	0.0
CV										49.68	38.66	91.0	0.0	0.0	0.0
Replicate F										2.143	1.634	1.489	0.000	0.000	0.000
Replicate Prob(F)										0.1080	0.1949	0.2304	1.0000	1.0000	1.0000
Treatment F										93.571	133.515	24.527	0.000	0.000	0.000
Treatment Prob(F)										0.0001	0.0001	0.0001	1.0000	1.0000	1.0000

Anthem Preemergence and Postemergence in Corn - Site 1.

Trial ID: 12-DSO-AnthemCN
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 5-29-12 Control Percent 30 DA-A	AMATA-HR 6-11-12 Control Percent 13 DA-C 30 DA-B	AMATA-HR 6-28-12 Control Percent 60 DA-A	AMATA-HR 7-28-12 Control Percent 90 DA-A
1	ANTHEM	2.15	SE	0.168	lb ai/a	10	fl oz/a	PRE	A	99 a	99 a	99 a	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	C				
2	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	C				
3	ANTHEM	2.15	SE	0.168	lb ai/a	10	fl oz/a	PRE	A	97 a	95 a	96 a	93 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C				
4	HARNESS	7	EC	2.36	lb ai/a	2.7	pt/a	PRE	A	93 b	85 b	83 b	73 bc
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C				
5	DUAL II MAGNUM	7.64	EC	1.6	lb ai/a	1.67	pt/a	PRE	A	92 b	78 c	79 b	69 c
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C				
6	ANTHEM ATZ	4.5	SE	1.13	lb ai/a	32	fl oz/a	PRE	A	99 a	99 a	99 a	98 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C				
7	BICEP LITE II MAGNUM	6	SC	2.25	lb ai/a	1.5	qt/a	PRE	A	98 a	97 a	97 a	96 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C				
8	HARNESS XTRA	6	EC	3.45	lb ai/a	2.3	qt/a	PRE	A	99 a	98 a	99 a	97 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C				
9	ZEMAX	3.67	SC	2.2	lb ai/a	2.4	qt/a	PRE	A	99 a	98 a	98 a	97 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C				
10	VERDICT	5.57	EC	0.696	lb ai/a	16	fl oz/a	PRE	A	97 a	97 a	98 a	93 a
	HORNET WDG	68.5	WG	0.128	lb ai/a	3	oz/a	POST	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST	C				
11	ANTHEM	2.15	SE	0.151	lb ai/a	9	fl oz/a	V2-V3	B	99 a	99 a	99 a	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B				
12	ANTHEM ATZ	4.5	SE	0.98	lb ai/a	28	fl oz/a	V2-V3	B	99 a	99 a	99 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B				
13	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	V2-V3	B	99 a	98 a	97 a	94 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2-V3	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B				
14	LAUDIS	3.5	SC	0.082	lb ai/a	3	fl oz/a	V2-V3	B	97 a	80 bc	83 b	78 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B				
15	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B	84 c	60 d	54 c	44 d
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B				

Anthem Preemergence and Postemergence in Corn - Site 1.

Trial ID: 12-DSO-AnthemCN
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
	Pest Code									AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
	Crop Code												
	Rating Date									5-29-12	6-11-12	6-28-12	7-28-12
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing										13 DA-C		
	Trt-Eval Interval									30 DA-A	30 DA-B	60 DA-A	90 DA-A
16	ANTHEM	2.15	SE	0.151	lb ai/a	9	fl oz/a	V2-V3	B	99 a	99 a	99 a	97 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V3	B				
	CORVUS	2.62	SC	0.0614	lb ai/a	3	fl oz/a	V2-V3	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	V2-V3	B				
	LSD (P=.05)									2.4	5.2	8.2	7.0
	Standard Deviation									1.7	3.6	5.7	4.9
	CV									1.73	3.93	6.22	5.52
	Replicate F									0.194	4.140	2.182	1.474
	Replicate Prob(F)									0.8997	0.0113	0.1032	0.2344
	Treatment F									24.377	37.772	18.405	39.825
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Anthem Preemergence and Postemergence in Corn - Site 1.

Trial ID: 12-DSO-AnthemCN
Location: De Soto, IL
Investigator: Bryan Young

Trial Comments

1. Protocol: FMC.
2. Ratings: CI at 14 and 30 DAE, 14 and 30 DA-B. 30 DA-B rating should include all plots.
   WC at 30, 60, and 90 DA-A, WC 30 DA-A is before POST application C.
   WC 60-80 DA-C.
3. Blanket burndown of Gramoxone Inteon (4 pt/A) plus NIS (0.5%) was applied on 4-28-12.
   Rainfall following the PRE application was approximately 0.5 inch the next day
   and an additional 0.25 inch 7 days later.
4. POST application C timing is 30 DA-A.
5. Yield if possible.
6. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
7. Harvested 9-24-12, (2) 30 inch rows by 27 ft.

Anthem Preemergence and Postemergence in Soybean - Site 1.

Trial ID: 12-DSO-AnthemSB
Location: De Soto, IL
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-29-12

Trial Location

City: De Soto
State/Prov.: IL
Postal Code: 62924
Country: USA

Objectives:
Evaluate glyphosate-resistant waterhemp control
from Anthem compared to competitive standards.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 4-29-12
Planting Method: SEEDED Seeded **Rate, Unit:** 155000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 27 LB/A, P2O5 69 LB/A, K2O 90 LB/A

Soil Description

% Sand: 14 **% OM:** 2.12 **Texture:** SIL SILT LOAM
% Silt: 67 **pH:** 6.9 **Soil Name:** OKAW
% Clay: 19 **CEC:** 12.7

Additional Measured Elements

Element	Quantity	Unit
P1	112	LB/A
K	386	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

Anthem Preemergence and Postemergence in Soybean - Site 1.

Trial ID: 12-DSO-AnthemSB
Location: De Soto, IL
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-10-12					7	DAY	30.1	79.2	F
2.	4-13-12	0.22	IN	RAIN	rain					
3.	4-15-12	0.47	IN	RAIN	rain					
4.	4-16-12	0.29	IN	RAIN	rain					
5.	4-17-12					7	DAY	36.7	75.6	F
6.	4-20-12	0.13	IN	RAIN	rain					
7.	4-22-12	0.13	IN	RAIN	rain					
8.	4-24-12					7	DAY	43.7	80.9	F
9.	4-27-12	0.04	IN	RAIN	rain					
10.	4-30-12	0.55	IN	RAIN	rain					
11.	5-1-12					7	DAY	59.1	91.3	F
12.	5-6-12	0.14	IN	RAIN	rain					
13.	5-7-12	0.07	IN	RAIN	rain					
14.	5-8-12					7	DAY	43.3	79	F
15.	5-15-12					7	DAY	44.9	89.1	F
16.	5-20-12	0.93	IN	RAIN	rain					
17.	5-22-12					7	DAY	45.5	92.8	F
18.	5-29-12					7	DAY	46.3	89.8	F
19.	5-30-12	0.02	IN	RAIN	rain					
20.	5-31-12	0.14	IN	RAIN	rain					
21.	6-4-12	0.49	IN	RAIN	rain					
22.	6-5-12					7	DAY	48.5	88.8	F
23.	6-11-12	0.21	IN	RAIN	rain					
24.	6-12-12					7	DAY	49.8	91.1	F
25.	6-17-12	0.03	IN	RAIN	rain					
26.	6-19-12					7	DAY	55.4	96.4	F
27.	6-26-12					7	DAY	51.1	105.4	F
28.	7-3-12					7	DAY	71.1	105	F
29.	7-8-12	0.07	IN	RAIN	rain					
30.	7-9-12	0.12	IN	RAIN	rain					
31.	7-10-12					7	DAY	65.9	93.9	F
32.	7-14-12	0.02	IN	RAIN	rain					
33.	7-17-12					7	DAY	60	102.3	F
34.	7-17-12	0.03	IN	RAIN	rain					
35.	7-24-12					7	DAY	64.1	102.1	F
36.	7-26-12	1.41	IN	RAIN	rain					
37.	7-29-12	0.24	IN	RAIN	rain					
38.	7-31-12					7	DAY	62.7	97.9	F
39.	8-2-12	0.08	IN	RAIN	rain					
40.	8-4-12	3.29	IN	RAIN	rain					
41.	8-5-12	0.21	IN	RAIN	rain					
42.	8-7-12					7	DAY	54.1	97.2	F

Southern Illinois University

Anthem Preemergence and Postemergence in Soybean - Site 1.

Trial ID: 12-DSO-AnthemSB
Location: De Soto, IL
Investigator: Bryan Young

Application Description

	A	B	C
Application Date:	4-29-12	5-20-12	
Time of Day:	14:30	9:00	
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	EPOST	POST-IN
Application Placement:	BROFOL	BROFOL	NOT
Applied By:	JRK	JRK	APPLIED
Air Temperature, Unit:	82 F	82 F	
% Relative Humidity:	52	64	
Wind Velocity, Unit:	2 MPH	4 MPH	
Wind Direction:	N	W	
Dew Presence (Y/N):	N no	N no	
Soil Temperature, Unit:	71 F	71 F	
Soil Moisture:	NORMAL	BELNOR	
% Cloud Cover:	100	0	
Next Rain Occurred On:	4-30-12	5-20-12	

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC	
Stage Majority, Percent:	NA	V2	
Stage Minimum, Percent:		V1	
Stage Maximum, Percent:		V2	
Height, Unit:		5 IN	
Height Minimum, Maximum:		3 5	

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	AMATA W DESC	AMATA W DESC	AMATA W DESC
Stage Majority, Percent:	NA	4	
Stage Minimum, Percent:		Coty	
Stage Maximum, Percent:		6	
Height, Unit:		2 IN	
Height Minimum, Maximum:		0.5 4	
Density, Unit:		0.5 FT2	

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Anthem Preemergence and Postemergence in Soybean - Site 1.

Trial ID: 12-DSO-AnthemSB
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-10-12 Yield bu/A
	Pest Code									
	Crop Code									
	Rating Date									
	Rating Type									
	Rating Unit									
	Rating Timing									
	Trt-Eval Interval									
1	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	30 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C	
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C	
2	AUTHORITY XL	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	28 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C	
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C	
3	VALOR XLT	40.3	WG	0.126	lb ai/a	5.0	oz/a	PRE	A	31 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C	
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C	
4	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	27 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C	
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C	
5	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	22 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C	
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C	
6	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	26 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C	
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C	
7	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	30 a
	ANTHEM	2.15	SE	0.101	lb ai/a	6	fl oz/a	EPOST	B	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B	
8	ANTHEM	2.15	SE	0.118	lb ai/a	7	fl oz/a	EPOST	B	27 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B	
9	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	EPOST	B	27 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B	
10	FLEXSTAR GT 3.5	2.82	SL	1.23	lb ae/a	3.5	pt/a	EPOST	B	27 a
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B	
11	EXTREME	2.17	SL	0.81	lb ai/a	3	pt/a	EPOST	B	27 a
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B	
12	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	EPOST	B	29 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B	
13	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	31 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	EPOST	B	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B	

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Anthem Preemergence and Postemergence in Soybean - Site 1.

Trial ID: 12-DSO-AnthemSB
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	
	Pest Code									
	Crop Code									GLXMA
	Rating Date									10-10-12
	Rating Type									Yield
	Rating Unit									bu/A
	Rating Timing									
	Trt-Eval Interval									
14	NONTREATED									20 a
	LSD (P=.05)									8.2
	Standard Deviation									4.9
	CV									17.96
	Replicate F									4.087
	Replicate Prob(F)									0.0286
	Treatment F									1.193
	Treatment Prob(F)									0.3375

Anthem Preemergence and Postemergence in Soybean - Site 1.

Trial ID: 12-DSO-AnthemSB
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-18-12 Injury Percent 14 DAE 19 DA-A	GLXMA 5-27-12 Injury Percent 7 DA-B	GLXMA 5-29-12 Injury Percent 30 DA-A	GLXMA 6-3-12 Injury Percent 30 DAE	GLXMA 6-10-12 Injury Percent 21 DA-B	GLXMA 6-19-12 Injury Percent 30 DA-B	GLXMA 6-28-12 Injury Percent 60 DA-A
1	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	0 a	0 e	0 c	0 d	0 c	0 a	0 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C							
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C							
2	AUTHORITY XL	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	0 a	0 e	0 c	0 d	0 c	0 a	0 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C							
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C							
3	VALOR XLT	40.3	WG	0.126	lb ai/a	5.0	oz/a	PRE	A	0 a	0 e	0 c	0 d	0 c	0 a	0 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C							
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C							
4	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	0 a	0 e	0 c	0 d	0 c	0 a	0 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C							
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C							
5	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	0 a	0 e	0 c	0 d	0 c	0 a	0 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C							
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C							
6	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	0 a	0 e	0 c	0 d	0 c	0 a	0 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C							
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C							
7	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	0 a	9 b	9 b	11 ab	4 b	0 a	0 a
	ANTHEM	2.15	SE	0.101	lb ai/a	6	fl oz/a	EPOST	B							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B							
8	ANTHEM	2.15	SE	0.118	lb ai/a	7	fl oz/a	EPOST	B		10 b	9 b	10 b	4 b	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B							
9	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	EPOST	B		17 a	13 a	12 a	5 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B							
10	FLEXSTAR GT 3.5	2.82	SL	1.23	lb ae/a	3.5	pt/a	EPOST	B		2 d	1 c	0 d	0 c	0 a	0 a
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B							
11	EXTREME	2.17	SL	0.81	lb ai/a	3	pt/a	EPOST	B		5 c	2 c	2 c	0 c	0 a	0 a
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B							
12	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	EPOST	B		1 de	0 c	0 d	0 c	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B							
13	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	0 a	17 a	14 a	12 a	4 ab	0 a	0 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	EPOST	B							
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B							
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B							

Anthem Preemergence and Postemergence in Soybean - Site 1.

Trial ID: 12-DSO-AnthemSB
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code							
Pest Code																
Crop Code										GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Rating Date										5-18-12	5-27-12	5-29-12	6-3-12	6-10-12	6-19-12	6-28-12
Rating Type										Injury	Injury	Injury	Injury	Injury	Injury	Injury
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing										14 DAE						
Trt-Eval Interval										19 DA-A	7 DA-B	30 DA-A	30 DAE	21 DA-B	30 DA-B	60 DA-A
14	NONTREATED									0 a	0 e	0 c	0 d	0 c	0 a	0 a
LSD (P=.05)										0.0	1.8	2.2	1.9	1.2	0.0	0.0
Standard Deviation										0.0	1.1	1.3	1.1	0.7	0.0	0.0
CV										0.0	24.12	37.76	32.64	59.29	0.0	0.0
Replicate F										0.000	0.582	0.728	0.958	3.059	0.000	0.000
Replicate Prob(F)										1.0000	0.5658	0.4922	0.3968	0.0641	1.0000	1.0000
Treatment F										0.000	109.328	50.768	68.583	23.544	0.000	0.000
Treatment Prob(F)										1.0000	0.0001	0.0001	0.0001	0.0001	1.0000	1.0000

Anthem Preemergence and Postemergence in Soybean - Site 1.

Trial ID: 12-DSO-AnthemSB
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 7-28-12 Injury Percent 90 DA-A
	Pest Code									
	Crop Code									
	Rating Date									
	Rating Type									
	Rating Unit									
	Rating Timing									
	Trt-Eval Interval									
1	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	0 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C	
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C	
2	AUTHORITY XL	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	0 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C	
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C	
3	VALOR XLT	40.3	WG	0.126	lb ai/a	5.0	oz/a	PRE	A	0 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C	
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C	
4	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	0 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C	
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C	
5	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	0 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C	
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C	
6	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	0 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C	
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C	
7	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	0 a
	ANTHEM	2.15	SE	0.101	lb ai/a	6	fl oz/a	EPOST	B	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B	
8	ANTHEM	2.15	SE	0.118	lb ai/a	7	fl oz/a	EPOST	B	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B	
9	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	EPOST	B	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B	
10	FLEXSTAR GT 3.5	2.82	SL	1.23	lb ae/a	3.5	pt/a	EPOST	B	0 a
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B	
11	EXTREME	2.17	SL	0.81	lb ai/a	3	pt/a	EPOST	B	0 a
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B	
12	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	EPOST	B	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B	
13	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	0 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	EPOST	B	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B	

Anthem Preemergence and Postemergence in Soybean - Site 1.

Trial ID: 12-DSO-AnthemSB
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	
	Pest Code									
	Crop Code									GLXMA
	Rating Date									7-28-12
	Rating Type									Injury
	Rating Unit									Percent
	Rating Timing									
	Trt-Eval Interval									90 DA-A
14	NONTREATED									0 a
	LSD (P=.05)									0.0
	Standard Deviation									0.0
	CV									0.0
	Replicate F									0.000
	Replicate Prob(F)									1.0000
	Treatment F									0.000
	Treatment Prob(F)									1.0000

Anthem Preemergence and Postemergence in Soybean - Site 1.

Trial ID: 12-DSO-AnthemSB
Location: De Soto, IL
Investigator: Bryan Young

Pest Code									AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
Crop Code													
Rating Date									5-20-12	5-29-12	6-19-12	6-28-12	7-19-12
Rating Type									Control	Control	Control	Control	Control
Rating Unit									Percent	Percent	Percent	Percent	Percent
Rating Timing									0 DA-B				
Trt-Eval Interval									21 DA-A	30 DA-A	30 DA-B	60 DA-A	60 DA-B
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
1	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	99 a	98 ab	97 a	97 ab	95 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C					
2	AUTHORITY XL	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	99 a	98 ab	96 a	95 ab	94 ab
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C					
3	VALOR XLT	40.3	WG	0.126	lb ai/a	5.0	oz/a	PRE	A	99 a	99 a	97 a	96 ab	95 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C					
4	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	99 a	97 ab	94 a	91 ab	88 ab
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C					
5	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	98 a	97 ab	93 a	93 ab	91 ab
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C					
6	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	93 b	89 c	73 b	64 cd	50 d
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C					
7	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	99 a	98 ab	98 a	98 a	97 a
	ANTHEM	2.15	SE	0.101	lb ai/a	6	fl oz/a	EPOST	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B					
8	ANTHEM	2.15	SE	0.118	lb ai/a	7	fl oz/a	EPOST	B		94 bc	85 ab	80 bc	77 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B					
9	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	EPOST	B		97 ab	93 a	90 ab	90 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B					
10	FLEXSTAR GT 3.5	2.82	SL	1.23	lb ae/a	3.5	pt/a	EPOST	B		91 c	76 b	70 c	70 c
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B					
11	EXTREME	2.17	SL	0.81	lb ai/a	3	pt/a	EPOST	B		83 d	52 c	45 e	48 d
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B					
12	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	EPOST	B		75 e	57 c	50 de	37 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B					
13	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	99 a	99 a	99 a	99 a	99 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	EPOST	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B					

Anthem Preemergence and Postemergence in Soybean - Site 1.

Trial ID: 12-DSO-AnthemSB
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
Pest Code										AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
Crop Code														
Rating Date										5-20-12	5-29-12	6-19-12	6-28-12	7-19-12
Rating Type										Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent
Rating Timing										0 DA-B				
Trt-Eval Interval										21 DA-A	30 DA-A	30 DA-B	60 DA-A	60 DA-B
14	NONTREATED									0 c	0 f	0 d	0 f	0 e
LSD (P=.05)										2.0	5.3	15.3	17.9	17.1
Standard Deviation										1.1	3.1	9.1	10.7	10.2
CV										1.3	3.63	11.5	13.99	13.84
Replicate F										0.258	0.899	1.178	0.692	2.310
Replicate Prob(F)										0.7757	0.4193	0.3237	0.5097	0.1193
Treatment F										2493.613	204.047	27.446	21.299	25.099
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001

Anthem Preemergence and Postemergence in Soybean - Site 1.

Trial ID: 12-DSO-AnthemSB
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 7-28-12 Control Percent 90 DA-A	AMATA-HR 8-18-12 Control Percent 90 DA-B
1	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	94 a	94 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C		
2	AUTHORITY XL	70	WG	0.284	lb ai/a	6.5	oz/a	PRE	A	93 a	94 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C		
3	VALOR XLT	40.3	WG	0.126	lb ai/a	5.0	oz/a	PRE	A	93 a	94 a
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C		
4	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	PRE	A	80 ab	85 ab
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C		
5	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	87 a	90 ab
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C		
6	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A	42 de	43 de
	SELECT	2	EC	0.125	lb ai/a	8	fl oz/a	POST-IN	C		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	POST-IN	C		
7	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	94 a	94 a
	ANTHEM	2.15	SE	0.101	lb ai/a	6	fl oz/a	EPOST	B		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B		
8	ANTHEM	2.15	SE	0.118	lb ai/a	7	fl oz/a	EPOST	B	67 bc	70 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B		
9	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	EPOST	B	87 a	87 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B		
10	FLEXSTAR GT 3.5	2.82	SL	1.23	lb ae/a	3.5	pt/a	EPOST	B	57 cd	57 cd
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B		
11	EXTREME	2.17	SL	0.81	lb ai/a	3	pt/a	EPOST	B	35 e	35 e
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B		
12	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	EPOST	B	23 e	23 e
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B		
13	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	99 a	99 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	EPOST	B		
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	EPOST	B		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPOST	B		

Anthem Preemergence and Postemergence in Soybean - Site 1.

Trial ID: 12-DSO-AnthemSB
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR	AMATA-HR
	Pest Code									AMATA-HR	AMATA-HR
	Crop Code										
	Rating Date									7-28-12	8-18-12
	Rating Type									Control	Control
	Rating Unit									Percent	Percent
	Rating Timing										
	Trt-Eval Interval									90 DA-A	90 DA-B
14	NONTREATED									0 f	0 f
	LSD (P=.05)									19.8	20.9
	Standard Deviation									11.8	12.4
	CV									17.38	18.05
	Replicate F									1.164	0.775
	Replicate Prob(F)									0.3281	0.4709
	Treatment F									21.501	19.676
	Treatment Prob(F)									0.0001	0.0001

Southern Illinois University

Anthem Preemergence and Postemergence in Soybean - Site 1.

Trial ID: 12-DSO-AnthemSB
Location: De Soto, IL
Investigator: Bryan Young

Trial Comments

1. Protocol: FMC (Anthem-SB).
2. Ratings: CI 14 and 30 DAE, 7 and 21 DA-B. WC 30, 60, and 90 DAT.
   WC at 30 DAT or before any POST application.
3. POST-IN application C is postemergence if needed, not applied, not needed.
4. Yield if possible.
5. Blanket burndown of Gramoxone Inteon (4 pt/A) plus NIS (0.5%) was applied on 4-28-12.
   Rainfall following the PRE application was approximately 0.5 inch the next day
   and an additional 0.25 inch 7 days later.
6. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
7. Harvested 10-10-12, (2) 30 inch rows by 27 ft.

Glyphosate plus Ultra Blazer Adjuvant Study - Winfield Solutions.

Trial ID: 12-DSO-BlazerAdj
Location: De Soto, IL
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-29-12

Trial Location

City: De Soto
State/Prov.: IL
Postal Code: 62924
Country: USA

Objectives:
Evaluate the efficacy of experimental adjuvants for combinations of Touchdown HiTech plus Ultra Blazer on glyphosate-resistant waterhemp.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 4-29-12
Planting Method: SEEDED Seeded **Rate, Unit:** 155000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 27 LB/A, P2O5 69 LB/A, K2O 90 LB/A

Soil Description

% Sand: 15.4 **% OM:** 2.15 **Texture:** SIL SILT LOAM
% Silt: 64.7 **pH:** 6.9 **Soil Name:** OKAW
% Clay: 19.9 **CEC:** 12.4

Additional Measured Elements

Element	Quantity	Unit
P1	94	LB/A
K	468	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

Glyphosate plus Ultra Blazer Adjuvant Study - Winfield Solutions.

Trial ID: 12-DSO-BlazerAdj
Location: De Soto, IL
Investigator: Bryan Young

Application Description

	A
Application Date:	6-2-12
Time of Day:	8:00
Application Method:	Spray
Application Timing:	6-8"W
Application Placement:	BROFOL
Applied By:	RJW
Air Temperature, Unit:	60 F
% Relative Humidity:	70
Wind Velocity, Unit:	1 MPH
Wind Direction:	SW
Dew Presence (Y/N):	Y yes
Soil Temperature, Unit:	64 F
Soil Moisture:	BELNOR
% Cloud Cover:	95
Next Rain Occurred On:	6-4-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	V3
Stage Minimum, Percent:	V2
Stage Maximum, Percent:	V3
Height, Unit:	8 IN
Height Minimum, Maximum:	6 8

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMATA W DESC
Stage Majority, Percent:	10
Stage Minimum, Percent:	2
Stage Maximum, Percent:	20
Height, Unit:	5 IN
Height Minimum, Maximum:	0.5 16
Density, Unit:	20 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

Glyphosate plus Ultra Blazer Adjuvant Study - Winfield Solutions.

Trial ID: 12-DSO-BlazerAdj
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-16-12 Injury Percent 14 DA-A	GLXMA 6-30-12 Injury Percent 28 DA-A	AMATA-HR 6-16-12 Control Percent 14 DA-A	AMATA-HR 6-30-12 Control Percent 28 DA-A
1	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6-8"W	A	7 c	4 abc	32 e	60 d
	ULTRA BLAZER	2	EC	0.25	lb ai/a	1	pt/a	6-8"W	A				
2	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6-8"W	A	7 c	3 bc	33 de	59 d
	ULTRA BLAZER	2	EC	0.25	lb ai/a	1	pt/a	6-8"W	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A				
3	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6-8"W	A	12 ab	5 ab	42 bcd	71 ab
	ULTRA BLAZER	2	EC	0.25	lb ai/a	1	pt/a	6-8"W	A				
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A				
4	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6-8"W	A	11 b	3 c	43 bc	70 ab
	ULTRA BLAZER	2	EC	0.25	lb ai/a	1	pt/a	6-8"W	A				
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A				
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	6-8"W	A				
5	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6-8"W	A	10 b	3 c	40 cde	70 ab
	ULTRA BLAZER	2	EC	0.25	lb ai/a	1	pt/a	6-8"W	A				
	AG 8034	100	SL	2	% v/v	2	% v/v	6-8"W	A				
6	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6-8"W	A	11 b	4 abc	41 cd	69 abc
	ULTRA BLAZER	2	EC	0.25	lb ai/a	1	pt/a	6-8"W	A				
	AG 8034	100	SL	2	% v/v	2	% v/v	6-8"W	A				
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	6-8"W	A				
7	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6-8"W	A	11 b	4 abc	54 a	72 a
	ULTRA BLAZER	2	EC	0.25	lb ai/a	1	pt/a	6-8"W	A				
	SUPERB HC	100	SL	1	pt/a	0.83	% v/v	6-8"W	A				
	AG 8034	100	SL	2	% v/v	2	% v/v	6-8"W	A				
8	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6-8"W	A	12 ab	5 ab	42 bcd	66 bc
	ULTRA BLAZER	2	EC	0.25	lb ai/a	1	pt/a	6-8"W	A				
	SUPERB HC	100	SL	0.5	% v/v	0.5	% v/v	6-8"W	A				
	AG 8034	100	SL	2	% v/v	2	% v/v	6-8"W	A				
9	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6-8"W	A	11 b	4 abc	37 cde	68 abc
	ULTRA BLAZER	2	EC	0.25	lb ai/a	1	pt/a	6-8"W	A				
	SUPERB HC	100	SL	0.5	% v/v	0.5	% v/v	6-8"W	A				
	AG 8034	100	SL	2	% v/v	2	% v/v	6-8"W	A				
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6-8"W	A				
10	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6-8"W	A	14 a	6 a	50 ab	71 a
	ULTRA BLAZER	2	EC	0.25	lb ai/a	1	pt/a	6-8"W	A				
	DESTINY HC	100	SL	1	pt/a	0.83	% v/v	6-8"W	A				
	AG 8034	100	SL	2	% v/v	2	% v/v	6-8"W	A				
11	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6-8"W	A	10 b	4 abc	37 cde	64 cd
	ULTRA BLAZER	2	EC	0.25	lb ai/a	1	pt/a	6-8"W	A				
	DESTINY HC	100	SL	0.5	% v/v	0.5	% v/v	6-8"W	A				
	AG 8034	100	SL	2	% v/v	2	% v/v	6-8"W	A				
12	TOUCHDOWN HI-TECH	5	SL	0.56	lb ae/a	14.3	fl oz/a	6-8"W	A	11 b	4 abc	38 cde	66 bc
	ULTRA BLAZER	2	EC	0.25	lb ai/a	1	pt/a	6-8"W	A				
	DESTINY HC	100	SL	0.5	% v/v	0.5	% v/v	6-8"W	A				
	AG 02013	100	SL	4	fl oz/a	4	fl oz/a	6-8"W	A				

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Glyphosate plus Ultra Blazer Adjuvant Study - Winfield Solutions.

Trial ID: 12-DSO-BlazerAdj
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code				
Pest Code												AMATA-HR	AMATA-HR
Crop Code										GLXMA	GLXMA		
Rating Date										6-16-12	6-30-12	6-16-12	6-30-12
Rating Type										Injury	Injury	Control	Control
Rating Unit										Percent	Percent	Percent	Percent
Rating Timing													
Trt-Eval Interval										14 DA-A	28 DA-A	14 DA-A	28 DA-A
13	NONTREATED									0 d	0 d	0 f	0 e
LSD (P=.05)										2.4	2.3	8.8	5.2
Standard Deviation										1.4	1.3	5.2	3.1
CV										14.68	37.79	13.89	4.96
Replicate F										1.946	0.301	1.582	0.000
Replicate Prob(F)										0.1647	0.7428	0.2262	1.0000
Treatment F										17.335	3.247	18.115	115.459
Treatment Prob(F)										0.0001	0.0068	0.0001	0.0001

Southern Illinois University

Glyphosate plus Ultra Blazer Adjuvant Study - Winfield Solutions.

Trial ID: 12-DSO-BlazerAdj
Location: De Soto, IL
Investigator: Bryan Young

Trial Comments

1. Protocol: Winfield Solutions.
2. Ratings: CI/WC 14 and 28 DAT.
3. Blanket burndown of Gramoxone Inteon (4 pt/A) plus NIS (0.5%) was applied on 4-28-12.
4. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
5. Not harvested.

Southern Illinois University

Cobra and Pyroxasulfone Postemergence in Soybean.

Trial ID: 12-DSO-CobraPOST
Location: De Soto, IL
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-29-12

Trial Location

City: De Soto
State/Prov.: IL
Postal Code: 62924
Country: USA

Objectives:
Evaluate the efficacy of Cobra, pyroxasulfone and the combination
on waterhemp from postemergence applications in soybean.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 4-29-12
Planting Method: SEEDED Seeded **Rate, Unit:** 155000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMX	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 27 LB/A, P2O5 69 LB/A, K2O 90 LB/A

Soil Description

% Sand: 14 **% OM:** 2.12 **Texture:** SIL SILT LOAM
% Silt: 67 **pH:** 6.9 **Soil Name:** OKAW
% Clay: 19 **CEC:** 12.7

Additional Measured Elements

Element	Quantity	Unit
P1	112	LB/A
K	386	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

Cobra and Pyroxasulfone Postemergence in Soybean.

Trial ID: 12-DSO-CobraPOST
Location: De Soto, IL
Investigator: Bryan Young

Application Description

	A	B
Application Date:	5-20-12	6-2-12
Time of Day:	8:30	9:00
Application Method:	Spray	Spray
Application Timing:	2-3"WH	4-6"WH
Application Placement:	BROFOL	BROFOL
Applied By:	JRK	RJW
Air Temperature, Unit:	80 F	60 F
% Relative Humidity:	64	70
Wind Velocity, Unit:	2 MPH	4 MPH
Wind Direction:	SW	SW
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	71 F	64 F
Soil Moisture:	BELNOR	BELNOR
% Cloud Cover:	0	90
Next Rain Occurred On:	5-20-12	6-4-12

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	V2	V3
Stage Majority, Percent:	V1	V2
Stage Minimum, Percent:	V2	V3
Height, Unit:	6 IN	8 IN
Height Minimum, Maximum:	4 6	6 8

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMATA W DESC	AMATA W DESC
Stage Majority, Percent:	4	10
Stage Minimum, Percent:	Coty	2
Stage Maximum, Percent:	6	16
Height, Unit:	2 IN	5 IN
Height Minimum, Maximum:	0.5 4	0.5 10
Density, Unit:	1 FT2	20 FT2

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA

Cobra and Pyroxasulfone Postemergence in Soybean.

Trial ID: 12-DSO-CobraPOST
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA Injury Percent 7 DAT	GLXMA Injury Percent 14 DAT	GLXMA Injury Percent 21 DAT	AMATA-HR Control Percent 14 DAT	AMATA-HR Control Percent 21 DAT	AMATA-HR Control Percent 28 DAT
1	NONTREATED									0 g	0 f	0 e	0 e	0 g	0 g
2	COBRA	2	EC	0.156	lb ai/a	10	fl oz/a	2-3"WH	A	28 bc	16 cde	7 bcd	97 a	97 ab	90 ab
	COC (PRIME OIL)	100	SL	0.83	% v/v	1	pt/a	2-3"WH	A						
3	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	2-3"WH	A	30 bc	17 bcd	3 de	97 a	97 ab	90 ab
	COC (PRIME OIL)	100	SL	0.83	% v/v	1	pt/a	2-3"WH	A						
4	COBRA	2	EC	0.156	lb ai/a	10	fl oz/a	2-3"WH	A	31 b	21 ab	10 ab	97 a	96 ab	95 a
	V-10206	85	WG	0.08	lb ai/a	1.5	oz/a	2-3"WH	A						
	COC (PRIME OIL)	100	SL	0.83	% v/v	1	pt/a	2-3"WH	A						
5	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	2-3"WH	A	36 a	24 a	13 a	98 a	97 a	97 a
	V-10206	85	WG	0.096	lb ai/a	1.8	oz/a	2-3"WH	A						
	COC (PRIME OIL)	100	SL	0.83	% v/v	1	pt/a	2-3"WH	A						
6	PREFIX	5.29	EC	0.99	lb ai/a	1.5	pt/a	2-3"WH	A	19 ef	19 bc	10 ab	97 a	96 ab	94 a
	COC (PRIME OIL)	100	SL	0.83	% v/v	1	pt/a	2-3"WH	A						
7	COBRA	2	EC	0.156	lb ai/a	10	fl oz/a	4-6"WH	B	26 bcd	19 bc	6 cd	89 b	88 bc	80 bc
	COC (PRIME OIL)	100	SL	0.83	% v/v	1	pt/a	4-6"WH	B						
8	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	4-6"WH	B	27 bcd	18 bc	6 bcd	84 bc	80 cd	75 c
	COC (PRIME OIL)	100	SL	0.83	% v/v	1	pt/a	4-6"WH	B						
9	COBRA	2	EC	0.156	lb ai/a	10	fl oz/a	4-6"WH	B	27 bcd	16 cde	5 cd	87 b	84 c	80 bc
	V-10206	85	WG	0.08	lb ai/a	1.5	oz/a	4-6"WH	B						
	COC (PRIME OIL)	100	SL	0.83	% v/v	1	pt/a	4-6"WH	B						
10	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	4-6"WH	B	26 cd	17 bcd	5 cd	88 b	84 c	73 cd
	V-10206	85	WG	0.096	lb ai/a	1.8	oz/a	4-6"WH	B						
	COC (PRIME OIL)	100	SL	0.83	% v/v	1	pt/a	4-6"WH	B						
11	PREFIX	5.29	EC	0.99	lb ai/a	1.5	pt/a	4-6"WH	B	16 f	13 de	4 cd	80 c	70 e	57 e
	COC (PRIME OIL)	100	SL	0.83	% v/v	1	pt/a	4-6"WH	B						
12	COBRA	2	EC	0.156	lb ai/a	10	fl oz/a	4-6"WH	B	23 de	16 cde	6 bcd	84 bc	72 de	63 de
	RESOURCE	0.86	EC	0.027	lb ai/a	4	fl oz/a	4-6"WH	B						
	COC (PRIME OIL)	100	SL	0.83	% v/v	1	pt/a	4-6"WH	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	4-6"WH	B						
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	4-6"WH	B						
13	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	4-6"WH	B	28 bc	19 bc	8 bc	87 b	82 c	72 cd
	RESOURCE	0.86	EC	0.0403	lb ai/a	6	fl oz/a	4-6"WH	B						
	COC (PRIME OIL)	100	SL	0.83	% v/v	1	pt/a	4-6"WH	B						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	4-6"WH	B						
	N-PAK AMS	3.4	SL	4.9	% v/v	2.5	lb ai/a	4-6"WH	B						
14	CADET	0.91	EC	0.0064	lb ai/a	0.9	fl oz/a	4-6"WH	B	17 f	11 e	3 de	57 d	55 f	43 f
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	4-6"WH	B						
LSD (P=.05)										4.8	4.7	3.9	6.2	9.0	11.0
Standard Deviation										2.8	2.8	2.3	3.7	5.4	6.6
CV										11.92	17.4	37.26	4.49	6.83	9.12
Replicate F										6.319	0.511	0.120	1.631	0.026	0.416
Replicate Prob(F)										0.0058	0.6056	0.8875	0.2150	0.9746	0.6638
Treatment F										28.919	12.000	6.319	148.515	69.543	46.581
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Cobra and Pyroxasulfone Postemergence in Soybean.

Trial ID: 12-DSO-CobraPOST
Location: De Soto, IL
Investigator: Bryan Young

Trial Comments

1. Protocol: Valent (V10206 MD 64.01).
2. Ratings: CI at 7 and 14 DAT; WC at 14, 21, and 28 DAT.
3. Blanket burndown of Gramoxone Inteon (4 pt/A) plus NIS (0.5%) was applied on 4-28-12.
   Rainfall following application A was on the same day, 8 hours after application.
4. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
5. DAT = Days after either application A or B.
   Ratings at 7 days after the 2-3"WH and 4-6"WH applications were on 5-27-12 and 6-9-12, respectively.
   Ratings at 14 days after the 2-3"WH and 4-6"WH applications were on 6-3-12 and 6-16-12, respectively.
   Ratings at 21 days after the 2-3"WH and 4-6"WH applications were on 6-10-12 and 6-23-12, respectively.
   Ratings at 28 days after the 2-3"WH and 4-6"WH applications were on 6-17-12 and 6-30-12, respectively.
6. Not harvested.

Southern Illinois University

Cobra and Pyroxasulfone Preemergence in Soybean.

Trial ID: 12-DSO-CobraPRE
Location: De Soto, IL
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-29-12

Trial Location

City: De Soto
State/Prov.: IL
Postal Code: 62924
Country: USA

Objectives:
Evaluate the efficacy of Cobra, pyroxasulfone and the combination
on waterhemp from preemergence applications in soybean.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 4-29-12
Planting Method: SEEDED Seeded **Rate, Unit:** 155000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMX	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 27 LB/A, P2O5 69 LB/A, K2O 90 LB/A

Soil Description

% Sand: 14 **% OM:** 2.12 **Texture:** SIL SILT LOAM
% Silt: 67 **pH:** 6.9 **Soil Name:** OKAW
% Clay: 19 **CEC:** 12.7

Additional Measured Elements

Element	Quantity	Unit
P1	112	LB/A
K	386	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

Southern Illinois University

Cobra and Pyroxasulfone Preemergence in Soybean.

Trial ID: 12-DSO-CobraPRE
Location: De Soto, IL
Investigator: Bryan Young

Application Description

	A
Application Date:	4-29-12
Time of Day:	14:00
Application Method:	Spray
Application Timing:	PRE
Application Placement:	BROFOL
Applied By:	JRK
Air Temperature, Unit:	85 F
% Relative Humidity:	57
Wind Velocity, Unit:	2 MPH
Wind Direction:	N
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	70 F
Soil Moisture:	NORMAL
% Cloud Cover:	100
Next Rain Occurred On:	4-30-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMATA W DESC
Stage Majority, Percent:	NA

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

Cobra and Pyroxasulfone Preemergence in Soybean.

Trial ID: 12-DSO-CobraPRE
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-6-12 Injury Percent 7 DA-A	GLXMA 5-13-12 Injury Percent 14 DA-A	GLXMA 5-20-12 Injury Percent 21 DA-A	AMATA-HR 5-13-12 Control Percent 14 DA-A	AMATA-HR 5-20-12 Control Percent 21 DA-A	AMATA-HR 5-27-12 Control Percent 28 DA-A
1	NONTREATED									0 a	0 a	0 a	0 d	0 d	0 d
2	PREFIX	5.29	EC	0.99	lb ai/a	1.5	pt/a	PRE	A	0 a	0 a	3 a	98 a	97 a	95 a
3	COBRA	2	EC	0.156	lb ai/a	10	fl oz/a	PRE	A	0 a	0 a	3 a	50 c	64 c	60 c
4	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	PRE	A	0 a	0 a	4 a	70 b	77 b	73 b
5	COBRA	2	EC	0.297	lb ai/a	19	fl oz/a	PRE	A	0 a	0 a	3 a	80 ab	81 b	78 b
6	V-10206	85	WG	0.08	lb ai/a	1.5	oz/a	PRE	A	0 a	0 a	2 a	99 a	98 a	93 a
7	V-10206	85	WG	0.096	lb ai/a	1.8	oz/a	PRE	A	0 a	0 a	2 a	99 a	97 a	95 a
8	COBRA	2	EC	0.156	lb ai/a	10	fl oz/a	PRE	A	0 a	0 a	3 a	99 a	97 a	93 a
	V-10206	85	WG	0.08	lb ai/a	1.5	oz/a	PRE	A						
9	COBRA	2	EC	0.188	lb ai/a	12	fl oz/a	PRE	A	0 a	0 a	1 a	99 a	98 a	96 a
	V-10206	85	WG	0.096	lb ai/a	1.8	oz/a	PRE	A						
LSD (P=.05)										0.0	0.0	3.3	19.1	8.1	7.6
Standard Deviation										0.0	0.0	1.9	11.0	4.7	4.4
CV										0.0	0.0	83.73	14.32	5.92	5.78
Replicate F										0.000	0.000	0.755	2.659	2.073	0.748
Replicate Prob(F)										1.0000	1.0000	0.4858	0.1007	0.1583	0.4892
Treatment F										0.000	0.000	1.136	27.971	140.911	150.739
Treatment Prob(F)										1.0000	1.0000	0.3922	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Cobra and Pyroxasulfone Preemergence in Soybean.

Trial ID: 12-DSO-CobraPRE
Location: De Soto, IL
Investigator: Bryan Young

Trial Comments

1. Protocol: Valent (V10206 MD 64.05).
2. Ratings: CI at 7 and 14 DAT; WC at 14, 21, and 28 DAT.
3. Blanket burndown of Gramoxone Inteon (4 pt/A) plus NIS (0.5%) was applied on 4-28-12.
4. Rainfall following the PRE application was approximately 0.5 inch the next day and an additional 0.25 inch 7 days later.
5. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
6. Not harvested.

Southern Illinois University

Impact Tank-Mixes for Glyphosate-Resistant Waterhemp.

Trial ID: 12-DSO-ImpactTM
Location: De Soto, IL
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-29-12

Trial Location

City: De Soto
State/Prov.: IL
Postal Code: 62924
Country: USA

Objectives:
Evaluate glyphosate-resistant waterhemp control
from herbicide combinations with Impact.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 61-06 **Description:** RR2/LL
BBCH Scale: BCOR **Planting Date:** 4-29-12
Planting Method: SEEDED Seeded **Rate, Unit:** 31000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Pest 2 Type: W **Code:** PANDI - Panicum dichotomiflorum Michx.
Common Name: panicum, fall

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 177 LB/A, P2O5 69 LB/A, K2O 90 LB/A

Soil Description

% Sand: 15.4 **% OM:** 2.15 **Texture:** SIL SILT LOAM
% Silt: 64.7 **pH:** 6.9 **Soil Name:** OKAW
% Clay: 19.9 **CEC:** 12.4

Additional Measured Elements

Element	Quantity	Unit
P1	94	LB/A
K	468	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

Impact Tank-Mixes for Glyphosate-Resistant Waterhemp.

Trial ID: 12-DSO-ImpactTM
Location: De Soto, IL
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-30-12	0.55	IN	RAIN	rain					
2.	5-1-12					7	DAY	59.1	91.3	F
3.	5-6-12	0.14	IN	RAIN	rain					
4.	5-7-12	0.07	IN	RAIN	rain					
5.	5-8-12					7	DAY	43.3	79	F
6.	5-15-12					7	DAY	44.9	89.1	F
7.	5-20-12	0.93	IN	RAIN	rain					
8.	5-22-12					7	DAY	45.5	92.8	F
9.	5-29-12					7	DAY	46.3	89.8	F
10.	5-30-12	0.02	IN	RAIN	rain					
11.	5-31-12	0.14	IN	RAIN	rain					
12.	6-4-12	0.49	IN	RAIN	rain					
13.	6-5-12					7	DAY	48.5	88.8	F
14.	6-11-12	0.21	IN	RAIN	rain					
15.	6-12-12					7	DAY	49.8	91.1	F
16.	6-17-12	0.03	IN	RAIN	rain					
17.	6-19-12					7	DAY	55.4	96.4	F
18.	6-26-12					7	DAY	51.1	105.4	F
19.	7-3-12					7	DAY	71.1	105	F
20.	7-8-12	0.07	IN	RAIN	rain					
21.	7-9-12	0.12	IN	RAIN	rain					
22.	7-10-12					7	DAY	65.9	93.9	F
23.	7-14-12	0.02	IN	RAIN	rain					
24.	7-17-12					7	DAY	60	102.3	F
25.	7-17-12	0.03	IN	RAIN	rain					
26.	7-24-12					7	DAY	64.1	102.1	F
27.	7-26-12	1.41	IN	RAIN	rain					
28.	7-29-12	0.24	IN	RAIN	rain					
29.	7-31-12					7	DAY	62.7	97.9	F
30.	8-2-12	0.08	IN	RAIN	rain					
31.	8-4-12	3.29	IN	RAIN	rain					
32.	8-5-12	0.21	IN	RAIN	rain					
33.	8-7-12					7	DAY	54.1	97.2	F

Application Description

	A
Application Date:	5-20-12
Time of Day:	9:30
Application Method:	Spray
Application Timing:	POST
Application Placement:	BROFOL
Applied By:	JRK
Air Temperature, Unit:	82 F
% Relative Humidity:	65
Wind Velocity, Unit:	4 MPH
Wind Direction:	SW
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	71 F
Soil Moisture:	BELNOR
% Cloud Cover:	0
Next Rain Occurred On:	5-20-12

Impact Tank-Mixes for Glyphosate-Resistant Waterhemp.

Trial ID: 12-DSO-ImpactTM
Location: De Soto, IL
Investigator: Bryan Young

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMD BCOR
Stage Scale Used:	DESC
Stage Majority, Percent:	V4
Stage Minimum, Percent:	V3
Stage Maximum, Percent:	V4
Height, Unit:	12 IN
Height Minimum, Maximum:	8 12

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMATA W DESC
Stage Majority, Percent:	6
Stage Minimum, Percent:	2
Stage Maximum, Percent:	10
Height, Unit:	3 IN
Height Minimum, Maximum:	0.5 6
Density, Unit:	1 FT2
Pest 2 Code, Type, Scale:	PANDI W DESC
Stage Majority, Percent:	2
Stage Minimum, Percent:	1
Stage Maximum, Percent:	3
Height, Unit:	2 IN
Height Minimum, Maximum:	1 4
Density, Unit:	3 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

Impact Tank-Mixes for Glyphosate-Resistant Waterhemp.

Trial ID: 12-DSO-ImpactTM
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 9-24-12 Moisture Percent	ZEAMD 9-24-12 Yield bu/A	ZEAMD 5-27-12 Injury Percent 7 DA-A	ZEAMD 6-4-12 Injury Percent 15 DA-A	ZEAMD 6-19-12 Injury Percent 30 DA-A
1	NONTREATED										6 b	0 a	0 a	0 a
2	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	POST	A	15.7 ab	27 a	0 a	0 a	0 a
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	POST	A					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	POST	A					
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	POST	A					
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A	15.2 ab	19 a	0 a	0 a	0 a
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	POST	A					
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A	18.2 a	26 a	0 a	0 a	0 a
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	POST	A					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	POST	A					
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	POST	A					
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	POST	A					
5	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	POST	A	17.7 a	26 a	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A					
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	POST	A					
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	POST	A					
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	POST	A					
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	POST	A					
6	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	POST	A	12.8 b	24 a	0 a	0 a	0 a
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	POST	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A					
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	POST	A					
LSD (P=.05)										3.29	12.5	0.0	0.0	0.0
Standard Deviation										2.14	8.3	0.0	0.0	0.0
CV										13.42	38.57	0.0	0.0	0.0
Replicate F										0.688	3.035	0.000	0.000	0.000
Replicate Prob(F)										0.5763	0.0619	1.0000	1.0000	1.0000
Treatment F										4.135	3.778	0.000	0.000	0.000
Treatment Prob(F)										0.0247	0.0205	1.0000	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Impact Tank-Mixes for Glyphosate-Resistant Waterhemp.

Trial ID: 12-DSO-ImpactTM
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 5-27-12 Control Percent 7 DA-A	AMATA-HR 6-4-12 Control Percent 15 DA-A	AMATA-HR 6-19-12 Control Percent 30 DA-A	AMATA-HR 7-19-12 Control Percent 60 DA-A
1	NONTREATED									0 c	0 c	0 c	0 c
2	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	POST	A	93 a	99 a	97 a	95 a
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	POST	A				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	POST	A				
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	POST	A				
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A	66 b	59 b	21 b	19 b
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	POST	A				
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A	91 a	99 a	97 a	98 a
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	POST	A				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	POST	A				
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	POST	A				
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	POST	A				
5	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	POST	A	93 a	99 a	99 a	96 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	POST	A				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	POST	A				
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	POST	A				
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	POST	A				
6	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	POST	A	94 a	99 a	99 a	99 a
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	POST	A				
LSD (P=.05)										4.7	3.9	4.1	9.9
Standard Deviation										3.1	2.6	2.7	6.6
CV										4.25	3.46	3.96	9.68
Replicate F										1.618	1.078	1.368	1.067
Replicate Prob(F)										0.2271	0.3883	0.2905	0.3924
Treatment F										581.026	952.191	1119.119	193.470
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

Impact Tank-Mixes for Glyphosate-Resistant Waterhemp.

Trial ID: 12-DSO-ImpactTM
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	PANDI	PANDI	PANDI	PANDI
	Pest Code									PANDI	PANDI	PANDI	PANDI
	Crop Code												
	Rating Date									5-27-12	6-4-12	6-19-12	7-19-12
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing												
	Trt-Eval Interval									7 DA-A	15 DA-A	30 DA-A	60 DA-A
1	NONTREATED									0 d	0 d	0 c	0 d
2	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	POST	A	79 ab	96 ab	91 a	93 ab
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	POST	A				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	POST	A				
	28% UAN	100	SL	2.5	% v/v	2.5	% v/v	POST	A				
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A	85 a	97 a	96 a	96 a
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	POST	A				
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A	71 bc	94 ab	92 a	93 ab
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	POST	A				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	POST	A				
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	POST	A				
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	POST	A				
5	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	POST	A	71 c	93 b	90 a	90 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	A				
	IMPACT	2.8	SC	0.0164	lb ai/a	0.75	fl oz/a	POST	A				
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	POST	A				
	MSO (MSO ULTRA)	100	SL	0.5	% v/v	0.5	% v/v	POST	A				
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	POST	A				
6	HALEX GT	4.38	CS	1.97	lb ai/a	3.6	pt/a	POST	A	73 bc	90 c	79 b	85 c
	AATREX	4	SC	0.5	lb ai/a	1	pt/a	POST	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	A				
	N-PAK AMS	100	SL	2.5	% v/v	3	pt/a	POST	A				
	LSD (P=.05)									7.7	3.2	5.7	5.2
	Standard Deviation									5.1	2.1	3.8	3.5
	CV									8.09	2.71	5.04	4.57
	Replicate F									1.019	1.795	1.523	1.765
	Replicate Prob(F)									0.4118	0.1914	0.2493	0.1969
	Treatment F									151.448	1309.381	387.511	463.992
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Impact Tank-Mixes for Glyphosate-Resistant Waterhemp.

Trial ID: 12-DSO-ImpactTM
Location: De Soto, IL
Investigator: Bryan Young

Trial Comments

1. Protocol: AMVAC.
2. CI at 7, 15, and 30 DAT. WC at 7, 15, 30, and 60 DAT.
3. POST timing is 2-4 inch weeds and V3-V4 corn.
4. Blanket burndown of Gramoxone Inteon (4 pt/A) plus NIS (0.5%) was applied on 4-28-12. Rainfall following application A was on the same day, 8 hours after application.
5. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
6. Harvested 9-24-12, (2) 30 inch rows by 27 ft.

Southern Illinois University

Evaluation of Linex plus Metolachlor in Soybean.

Trial ID: 12-DSO-Linex
Location: De Soto, IL
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-29-12

Trial Location

City: De Soto
State/Prov.: IL
Postal Code: 62924
Country: USA

Objectives:
Determine the efficacy of Linex alone and in combinations with metolachlor
for residual control of glyphosate-resistant waterhemp.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 4-29-12
Planting Method: SEEDED Seeded **Rate, Unit:** 155000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 27 LB/A, P2O5 69 LB/A, K2O 90 LB/A

Soil Description

% Sand: 15.4 **% OM:** 2.15 **Texture:** SIL SILT LOAM
% Silt: 64.7 **pH:** 6.9 **Soil Name:** OKAW
% Clay: 19.9 **CEC:** 12.4

Additional Measured Elements

Element	Quantity	Unit
P1	94	LB/A
K	468	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

Evaluation of Linex plus Metolachlor in Soybean.

Trial ID: 12-DSO-Linex
Location: De Soto, IL
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-10-12					7	DAY	30.1	79.2	F
2.	4-13-12	0.22	IN	RAIN	rain					
3.	4-15-12	0.47	IN	RAIN	rain					
4.	4-16-12	0.29	IN	RAIN	rain					
5.	4-17-12					7	DAY	36.7	75.6	F
6.	4-20-12	0.13	IN	RAIN	rain					
7.	4-22-12	0.13	IN	RAIN	rain					
8.	4-24-12					7	DAY	43.7	80.9	F
9.	4-27-12	0.04	IN	RAIN	rain					
10.	4-30-12	0.55	IN	RAIN	rain					
11.	5-1-12					7	DAY	59.1	91.3	F
12.	5-6-12	0.14	IN	RAIN	rain					
13.	5-7-12	0.07	IN	RAIN	rain					
14.	5-8-12					7	DAY	43.3	79	F
15.	5-15-12					7	DAY	44.9	89.1	F
16.	5-20-12	0.93	IN	RAIN	rain					
17.	5-22-12					7	DAY	45.5	92.8	F
18.	5-29-12					7	DAY	46.3	89.8	F
19.	5-30-12	0.02	IN	RAIN	rain					
20.	5-31-12	0.14	IN	RAIN	rain					
21.	6-4-12	0.49	IN	RAIN	rain					
22.	6-5-12					7	DAY	48.5	88.8	F
23.	6-11-12	0.21	IN	RAIN	rain					
24.	6-12-12					7	DAY	49.8	91.1	F
25.	6-17-12	0.03	IN	RAIN	rain					
26.	6-19-12					7	DAY	55.4	96.4	F
27.	6-26-12					7	DAY	51.1	105.4	F
28.	7-3-12					7	DAY	71.1	105	F
29.	7-8-12	0.07	IN	RAIN	rain					
30.	7-9-12	0.12	IN	RAIN	rain					
31.	7-10-12					7	DAY	65.9	93.9	F
32.	7-14-12	0.02	IN	RAIN	rain					
33.	7-17-12	0.03	IN	RAIN	rain					
34.	7-17-12					7	DAY	60	102.3	F
35.	7-24-12					7	DAY	64.1	102.1	F
36.	7-26-12	1.41	IN	RAIN	rain					
37.	7-29-12	0.24	IN	RAIN	rain					
38.	7-31-12					7	DAY	62.7	97.9	F

Comment:
From the Illinois Water and Climate Summary;
Temperatures in Illinois were above normal and precipitation was below normal during April.
Temperatures in Illinois were much above normal and precipitation was below normal during May.
Temperatures in Illinois were above normal and precipitation was much below normal during June.
Temperatures in Illinois were much above normal and precipitation was much below normal during July.
Temperatures and precipitation in Illinois were near normal during August.

Southern Illinois University

Evaluation of Linex plus Metolachlor in Soybean.

Trial ID: 12-DSO-Linex
Location: De Soto, IL
Investigator: Bryan Young

Application Description

	A	B
Application Date:	4-29-12	5-28-12
Time of Day:	16:00	7:00
Application Method:	Spray	Spray
Application Timing:	PRE	28DAP
Application Placement:	BROFOL	BROFOL
Applied By:	JRK	JRK
Air Temperature, Unit:	80 F	77 F
% Relative Humidity:	59	82
Wind Velocity, Unit:	2 MPH	1 MPH
Wind Direction:	N	S
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	70 F	81 F
Soil Moisture:	NORMAL	BELNOR
% Cloud Cover:	100	10
Next Rain Occurred On:	4-30-12	5-30-12

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	V3
Stage Minimum, Percent:		V2
Stage Maximum, Percent:		V3
Height, Unit:		6 IN
Height Minimum, Maximum:		4 6

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMATA W DESC	AMATA W DESC
Stage Majority, Percent:	NA	4
Stage Minimum, Percent:		2
Stage Maximum, Percent:		8
Height, Unit:		3 IN
Height Minimum, Maximum:		1 5
Density, Unit:		0.5 FT2

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA

Evaluation of Linex plus Metolachlor in Soybean.

Trial ID: 12-DSO-Linex
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-13-12 Injury Percent 14 DAP 14 DA-A	GLXMA 5-27-12 Injury Percent 28 DAP 28 DA-A	GLXMA 6-18-12 Injury Percent 21 DA-B	AMATA-HR 5-27-12 Control Percent 28 DAP 28 DA-A	AMATA-HR 6-18-12 Control Percent 21 DA-B
1	LINEX	4	SC	0.5	lb ai/a	1	pt/a	PRE	A	0 a	0 a	0 a	80 c	73 e
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	28DAP	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	B					
2	LINEX	4	SC	0.75	lb ai/a	1.5	pt/a	PRE	A	0 a	0 a	0 a	79 c	76 e
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	28DAP	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	B					
3	LINEX	4	SC	1	lb ai/a	2	pt/a	PRE	A	0 a	0 a	0 a	82 c	76 e
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	28DAP	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	B					
4	LINEX	4	SC	1.25	lb ai/a	2.5	pt/a	PRE	A	0 a	0 a	0 a	91 b	83 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	28DAP	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	B					
5	LINEX	4	SC	0.5	lb ai/a	1	pt/a	PRE	A	0 a	0 a	0 a	96 a	87 cd
	PARALLEL	7.8	EC	1.63	lb ai/a	1.67	pt/a	PRE	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	28DAP	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	B					
6	LINEX	4	SC	0.75	lb ai/a	1.5	pt/a	PRE	A	0 a	0 a	0 a	96 a	90 bc
	PARALLEL	7.8	EC	1.63	lb ai/a	1.67	pt/a	PRE	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	28DAP	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	B					
7	LINEX	4	SC	1	lb ai/a	2	pt/a	PRE	A	0 a	0 a	0 a	97 a	95 ab
	PARALLEL	7.8	EC	1.63	lb ai/a	1.67	pt/a	PRE	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	28DAP	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	B					
8	LINEX	4	SC	1.25	lb ai/a	2.5	pt/a	PRE	A	1 a	0 a	0 a	96 a	95 ab
	PARALLEL	7.8	EC	1.63	lb ai/a	1.67	pt/a	PRE	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	28DAP	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	B					
9	PARALLEL	7.8	EC	1.63	lb ai/a	1.67	pt/a	PRE	A	0 a	0 a	0 a	82 c	71 e
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	28DAP	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	B					
10	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	0 a	0 a	0 a	97 a	97 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	28DAP	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	B					
11	NONTREATED									0 a	0 a	0 a	0 d	0 f
LSD (P=.05)										0.9	0.0	0.0	4.3	6.2
Standard Deviation										0.5	0.0	0.0	2.5	3.6
CV										574.46	0.0	0.0	3.1	4.74
Replicate F										1.000	0.000	0.000	1.324	6.361
Replicate Prob(F)										0.3855	1.0000	1.0000	0.2885	0.0073
Treatment F										1.000	0.000	0.000	369.286	166.902
Treatment Prob(F)										0.4755	1.0000	1.0000	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Evaluation of Linex plus Metolachlor in Soybean.

Trial ID: 12-DSO-Linex
Location: De Soto, IL
Investigator: Bryan Young

Trial Comments

1. Protocol: TKI - NovaSource.
2. Ratings: CI at 14 and 28 DAP. WC at 28 DAP and 21 DA-B.
3. Blanket burndown of Gramoxone Inteon (4 pt/A) plus NIS (0.5%) was applied on 4-28-12.
4. Rainfall following the PRE application was approximately 0.5 inch the next day and an additional 0.25 inch 7 days later.
5. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
6. Not harvested.

Matador and Top Gun Evaluation in Soybean.

Trial ID: 12-DSO-Matador
Location: De Soto, IL
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-29-12

Trial Location

City: De Soto
State/Prov.: IL
Postal Code: 62924
Country: USA

Objectives:
Compare Matador/Top Gun to competitive preemergence herbicides for control of waterhemp in soybean.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG 4005 **Description:** RR
BBCH Scale: BSOY **Planting Date:** 4-29-12
Planting Method: SEEDED Seeded **Rate, Unit:** 165000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 27 LB/A, P2O5 69 LB/A, K2O 90 LB/A

Soil Description

% Sand: 14 **% OM:** 2.12 **Texture:** SIL SILT LOAM
% Silt: 67 **pH:** 6.9 **Soil Name:** OKAW
% Clay: 19 **CEC:** 12.7

Additional Measured Elements

Element	Quantity	Unit
P1	112	LB/A
K	386	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

Matador and Top Gun Evaluation in Soybean.

Trial ID: 12-DSO-Matador
Location: De Soto, IL
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-10-12					7	DAY	30.1	79.2	F
2.	4-13-12	0.22	IN	RAIN	rain					
3.	4-15-12	0.47	IN	RAIN	rain					
4.	4-16-12	0.29	IN	RAIN	rain					
5.	4-17-12					7	DAY	36.7	75.6	F
6.	4-20-12	0.13	IN	RAIN	rain					
7.	4-22-12	0.13	IN	RAIN	rain					
8.	4-24-12					7	DAY	43.7	80.9	F
9.	4-27-12	0.04	IN	RAIN	rain					
10.	4-30-12	0.55	IN	RAIN	rain					
11.	5-1-12					7	DAY	59.1	91.3	F
12.	5-6-12	0.14	IN	RAIN	rain					
13.	5-7-12	0.07	IN	RAIN	rain					
14.	5-8-12					7	DAY	43.3	79	F
15.	5-15-12					7	DAY	44.9	89.1	F
16.	5-20-12	0.93	IN	RAIN	rain					
17.	5-22-12					7	DAY	45.5	92.8	F
18.	5-29-12					7	DAY	46.3	89.8	F
19.	5-30-12	0.02	IN	RAIN	rain					
20.	5-31-12	0.14	IN	RAIN	rain					
21.	6-4-12	0.49	IN	RAIN	rain					
22.	6-5-12					7	DAY	48.5	88.8	F
23.	6-11-12	0.21	IN	RAIN	rain					
24.	6-12-12					7	DAY	49.8	91.1	F
25.	6-17-12	0.03	IN	RAIN	rain					
26.	6-19-12					7	DAY	55.4	96.4	F
27.	6-26-12					7	DAY	51.1	105.4	F
28.	7-3-12					7	DAY	71.1	105	F
29.	7-8-12	0.07	IN	RAIN	rain					
30.	7-9-12	0.12	IN	RAIN	rain					
31.	7-10-12					7	DAY	65.9	93.9	F
32.	7-14-12	0.02	IN	RAIN	rain					
33.	7-17-12					7	DAY	60	102.3	F
34.	7-17-12	0.03	IN	RAIN	rain					
35.	7-24-12					7	DAY	64.1	102.1	F
36.	7-26-12	1.41	IN	RAIN	rain					
37.	7-29-12	0.24	IN	RAIN	rain					
38.	7-31-12					7	DAY	62.7	97.9	F
39.	8-2-12	0.08	IN	RAIN	rain					
40.	8-4-12	3.29	IN	RAIN	rain					
41.	8-5-12	0.21	IN	RAIN	rain					
42.	8-7-12					7	DAY	54.1	97.2	F

Matador and Top Gun Evaluation in Soybean.

Trial ID: 12-DSO-Matador
Location: De Soto, IL
Investigator: Bryan Young

Application Description

	A	B	C
Application Date:	4-29-12	5-28-12	6-11-12
Time of Day:	13:30	7:00	9:00
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	28DA-A	14DA-B
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	RJW	LAH	RJW
Air Temperature, Unit:	82 F	77 F	80 F
% Relative Humidity:	52	82	78
Wind Velocity, Unit:	2 MPH	1 MPH	4 MPH
Wind Direction:	NE	S	S
Dew Presence (Y/N):	N no	N no	N no
Soil Temperature, Unit:	73 F	81 F	79 F
Soil Moisture:	NORMAL	BELNOR	BELNOR
% Cloud Cover:	100	10	100
Next Rain Occurred On:	4-30-12	5-30-12	6-11-12

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	V3	V6
Stage Minimum, Percent:		V2	V5
Stage Maximum, Percent:		V3	V6
Height, Unit:		6 IN	10 IN
Height Minimum, Maximum:		4 6	8 10

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	AMATA W DESC	AMATA W DESC	AMATA W DESC
Stage Majority, Percent:	NA	8	12
Stage Minimum, Percent:		2	4
Stage Maximum, Percent:		12	18
Height, Unit:		3 IN	4 IN
Height Minimum, Maximum:		0.5 4	1 8
Density, Unit:		5 FT2	0.1 FT2

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Matador and Top Gun Evaluation in Soybean.

Trial ID: 12-DSO-Matador
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-10-12 Moisture Percent	GLXMA 10-10-12 Yield bu/A
	Pest Code										
	Crop Code										
	Rating Date										
	Rating Type										
	Rating Unit										
	Rating Timing										
	Trt-Eval Interval										
1	NONTREATED									16.3 ab	29 d
2	LI6407	100	SL	2	pt/a	2	pt/a	PRE	A	15.3 bc	39 bc
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B		
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B		
3	LI6407	100	SL	2	pt/a	2	pt/a	PRE	A	15.2 bcd	39 bc
	TOP GUN	2	SC	0.25	lb ai/a	1	pt/a	PRE	A		
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B		
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B		
4	LI6378	100	SL	3	pt/a	3	pt/a	PRE	A	14.0 d	41 abc
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B		
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B		
5	LI6378	100	SL	1.5	pt/a	1.5	pt/a	PRE	A	14.2 cd	41 abc
	TOP GUN	2	SC	0.25	lb ai/a	1	pt/a	PRE	A		
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B		
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B		
6	VALOR XLT	40.3	WG			3	oz/a	PRE	A	14.0 d	38 c
	VALOR SX	51	WG	0.056	lb ai/a			PRE	A		
	CLASSIC	25	WG	0.0194	lb ai/a			PRE	A		
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B		
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B		
7	AUTHORITY MTZ	45	WG	0.28	lb ai/a	10	oz/a	PRE	A	14.3 cd	43 a
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B		
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B		
8	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	14.2 cd	40 abc
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B		
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B		
9	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	14.7 cd	38 c
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B		
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B		
10	SONIC	70	WG	0.14	lb ai/a	3.2	oz/a	PRE	A	14.4 cd	42 ab
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B		
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B		
11	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B	16.7 a	40 abc
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B		
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	14DA-B	C		
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	14DA-B	C		
	LSD (P=.05)									1.23	3.2
	Standard Deviation									0.86	2.2
	CV									5.76	5.68
	Replicate F									5.151	6.535
	Replicate Prob(F)									0.0054	0.0016
	Treatment F									4.717	11.322
	Treatment Prob(F)									0.0004	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Matador and Top Gun Evaluation in Soybean.

Trial ID: 12-DSO-Matador
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-20-12 Injury Percent 21 DA-A	GLXMA 5-27-12 Injury Percent 28 DA-A	GLXMA 6-11-12 Injury Percent 0 DA-C 14 DA-B	GLXMA 6-25-12 Injury Percent 14 DA-C 28 DA-B
1	NONTREATED									0 a	0 a	0 a	0 a
2	LI6407	100	SL	2	pt/a	2	pt/a	PRE	A	0 a	0 a	0 a	0 a
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B				
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B				
3	LI6407	100	SL	2	pt/a	2	pt/a	PRE	A	0 a	0 a	0 a	0 a
	TOP GUN	2	SC	0.25	lb ai/a	1	pt/a	PRE	A				
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B				
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B				
4	LI6378	100	SL	3	pt/a	3	pt/a	PRE	A	0 a	0 a	0 a	0 a
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B				
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B				
5	LI6378	100	SL	1.5	pt/a	1.5	pt/a	PRE	A	0 a	0 a	0 a	0 a
	TOP GUN	2	SC	0.25	lb ai/a	1	pt/a	PRE	A				
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B				
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B				
6	VALOR XLT	40.3	WG			3	oz/a	PRE	A	0 a	0 a	0 a	0 a
	VALOR SX	51	WG	0.056	lb ai/a			PRE	A				
	CLASSIC	25	WG	0.0194	lb ai/a			PRE	A				
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B				
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B				
7	AUTHORITY MTZ	45	WG	0.28	lb ai/a	10	oz/a	PRE	A	0 a	0 a	0 a	0 a
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B				
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B				
8	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	0 a	0 a	0 a	0 a
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B				
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B				
9	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	0 a	0 a	0 a	0 a
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B				
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B				
10	SONIC	70	WG	0.14	lb ai/a	3.2	oz/a	PRE	A	0 a	0 a	0 a	0 a
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B				
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B				
11	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B			0 a	0 a
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B				
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	14DA-B	C				
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	14DA-B	C				
LSD (P=.05)										0.0	0.0	0.0	0.0
Standard Deviation										0.0	0.0	0.0	0.0
CV										0.0	0.0	0.0	0.0
Replicate F										0.000	0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000	1.0000

Matador and Top Gun Evaluation in Soybean.

Trial ID: 12-DSO-Matador
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 5-20-12 Control Percent 21 DA-A	AMATA-HR 5-27-12 Control Percent 28 DA-A	AMATA-HR 6-11-12 Control Percent 0 DA-C 14 DA-B	AMATA-HR 6-25-12 Control Percent 14 DA-C 28 DA-B
1	NONTREATED									0 c	0 c	0 c	0 c
2	LI6407	100	SL	2	pt/a	2	pt/a	PRE	A	99 a	95 b	97 a	96 a
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B				
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B				
3	LI6407	100	SL	2	pt/a	2	pt/a	PRE	A	99 a	98 a	98 a	97 a
	TOP GUN	2	SC	0.25	lb ai/a	1	pt/a	PRE	A				
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B				
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B				
4	LI6378	100	SL	3	pt/a	3	pt/a	PRE	A	99 a	99 a	99 a	97 a
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B				
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B				
5	LI6378	100	SL	1.5	pt/a	1.5	pt/a	PRE	A	99 a	99 a	99 a	97 a
	TOP GUN	2	SC	0.25	lb ai/a	1	pt/a	PRE	A				
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B				
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B				
6	VALOR XLT	40.3	WG			3	oz/a	PRE	A	99 a	98 a	99 a	97 a
	VALOR SX	51	WG	0.056	lb ai/a			PRE	A				
	CLASSIC	25	WG	0.0194	lb ai/a			PRE	A				
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B				
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B				
7	AUTHORITY MTZ	45	WG	0.28	lb ai/a	10	oz/a	PRE	A	96 b	95 b	94 a	94 a
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B				
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B				
8	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	99 a	99 a	99 a	98 a
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B				
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B				
9	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	99 a	98 a	97 a	96 a
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B				
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B				
10	SONIC	70	WG	0.14	lb ai/a	3.2	oz/a	PRE	A	99 a	98 a	98 a	97 a
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B				
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B				
11	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	28DA-A	B			80 b	83 b
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	28DA-A	B				
	MAKAZE	3	SL	0.75	lb ae/a	32	fl oz/a	14DA-B	C				
	WEATHER GUARD COMPLETE	100	SL	0.5	% v/v	2	qt/100 gal	14DA-B	C				
LSD (P=.05)										1.1	2.3	6.4	4.4
Standard Deviation										0.8	1.6	4.4	3.0
CV										0.86	1.82	5.05	3.49
Replicate F										0.496	3.155	2.618	4.374
Replicate Prob(F)										0.6881	0.0410	0.0691	0.0114
Treatment F										6608.887	1497.454	178.404	369.144
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Matador and Top Gun Evaluation in Soybean.

Trial ID: 12-DSO-Matador
Location: De Soto, IL

Investigator: Bryan Young

Trial Comments

1. Protocol: Loveland (Project No. 39).
2. Ratings: CI/WC at 21 and 28 DA-A and 14 and 28 DA-B.
3. Yield.
4. Take photos at 28 DA-A and 14 DA-B.
5. Blanket burndown of Gramoxone Inteon (4 pt/A) plus NIS (0.5%) was applied on 4-28-12.
6. Rainfall following the PRE application was approximately 0.5 inch the next day
   and an additional 0.25 inch 7 days later.
   Rainfall following application C was on the same day, 4 hours after application.
7. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
8. Harvested 10-10-12, (2) 30 inch rows by 27 ft.

BASF Burndown and Residual in Soybean.

Trial ID: 12-FagerS-BASF-BD
Location: Murphysboro, IL
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-24-12

Trial Location

City: Murphysboro
State/Prov.: IL
Postal Code: 62966
Country: USA

Objectives:
Demonstrate BASF soybean herbicide portfolio effectiveness
compared to current commercial standards.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 5-1-12
Planting Method: SEEDED Seeded **Rate, Unit:** 155000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** ERICA - Conyza canadensis (L.) Crong.
Common Name: horseweed
Description: glyphosate-resistant marestail

Pest 2 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.87 **Texture:** SIL SILT LOAM
pH: 5.5 **Soil Name:** ALVIN
CEC: 7.06

Additional Measured Elements

Element	Quantity	Unit
P1	172	LB/A
K	446	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

BASF Burndown and Residual in Soybean.

Trial ID: 12-FagerS-BASF-BD
Location: Murphysboro, IL
Investigator: Bryan Young

Application Description

	A	B
Application Date:	4-24-12	6-5-12
Time of Day:	9:30	8:30
Application Method:	Spray	Spray
Application Timing:	7-10DBP	6-8WA-A
Application Placement:	BROFOL	BROFOL
Applied By:	LAH	RJW
Air Temperature, Unit:	67 F	70 F
% Relative Humidity:	51	60
Wind Velocity, Unit:	4 MPH	4 MPH
Wind Direction:	W	N
Dew Presence (Y/N):	N no	Y yes
Soil Temperature, Unit:	54 F	71 F
Soil Moisture:	NORMAL	NORMAL
% Cloud Cover:	15	0
Next Rain Occurred On:	4-27-12	6-10-12

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	V4
Stage Minimum, Percent:		V3
Stage Maximum, Percent:		V4
Height, Unit:		8 IN
Height Minimum, Maximum:		6 8

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	ERICA W DESC	ERICA W DESC
Stage Majority, Percent:	25	50+
Stage Minimum, Percent:	4	15
Stage Maximum, Percent:	45	50+
Height, Unit:	6 IN	12 IN
Height Minimum, Maximum:	1 10	3 18
Density, Unit:	1 FT2	1 FT2
Pest 2 Code, Type, Scale:	AMATA W DESC	AMATA W DESC
Stage Majority, Percent:	NA	20
Stage Minimum, Percent:		4
Stage Maximum, Percent:		50+
Height, Unit:		6 IN
Height Minimum, Maximum:		1 12
Density, Unit:		1 FT2

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA

BASF Burndown and Residual in Soybean.

Trial ID: 12-FagerS-BASF-BD
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-11-12 Injury Percent 5 DAE 17 DA-A	GLXMA 6-5-12 Injury Percent 0 DA-B	GLXMA 6-26-12 Injury Percent 21 DA-B
1	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	7-10DBP	A	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			
2	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	7-10DBP	A	0 a	0 a	0 a
	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			
3	OPTILL PRO (CO-PACK)							7-10DBP	A	0 a	0 a	0 a
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	7-10DBP	A			
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			
4	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	7-10DBP	A	0 a	0 a	0 a
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			
5	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	7-10DBP	A	0 a	0 a	0 a
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			
6	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	7-10DBP	A	0 a	0 a	0 a
	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			
7	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	7-10DBP	A	0 a	0 a	0 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			
8	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	7-10DBP	A	0 a	0 a	0 a
	FIERCE XLT	55.68	WG	0.104	lb ai/a	3	oz/a	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

BASF Burndown and Residual in Soybean.

Trial ID: 12-FagerS-BASF-BD
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-11-12 Injury Percent 5 DAE 17 DA-A	GLXMA 6-5-12 Injury Percent 0 DA-B	GLXMA 6-26-12 Injury Percent 21 DA-B
9	NONTREATED									0 a	0 a	0 a
LSD (P=.05)										0.0	0.0	0.0
Standard Deviation										0.0	0.0	0.0
CV										0.0	0.0	0.0
Replicate F										0.000	0.000	0.000
Replicate Prob(F)										1.0000	1.0000	1.0000
Treatment F										0.000	0.000	0.000
Treatment Prob(F)										1.0000	1.0000	1.0000

BASF Burndown and Residual in Soybean.

Trial ID: 12-FagerS-BASF-BD
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR 5-15-12 Control Percent 21 DA-A	ERICA-HR 6-5-12 Control Percent 42 DA-A 0 DA-B	ERICA-HR 6-26-12 Control Percent 63 DA-A 21 DA-B
1	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	7-10DBP	A	92 b	94 a	91 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			
2	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	7-10DBP	A	97 a	96 a	96 a
	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			
3	OPTILL PRO (CO-PACK)							7-10DBP	A	96 a	95 a	95 a
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	7-10DBP	A			
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			
4	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	7-10DBP	A	97 a	96 a	95 a
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			
5	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	7-10DBP	A	97 a	96 a	95 a
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			
6	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	7-10DBP	A	90 c	84 b	84 c
	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			
7	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	7-10DBP	A	88 c	85 b	86 bc
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			
8	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	7-10DBP	A	89 c	88 b	88 bc
	FIERCE XLT	55.68	WG	0.104	lb ai/a	3	oz/a	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			

BASF Burndown and Residual in Soybean.

Trial ID: 12-FagerS-BASF-BD
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR	ERICA-HR	ERICA-HR
Pest Code										ERICA-HR	ERICA-HR	ERICA-HR
Crop Code												
Rating Date										5-15-12	6-5-12	6-26-12
Rating Type										Control	Control	Control
Rating Unit										Percent	Percent	Percent
Rating Timing											42 DA-A	63 DA-A
Trt-Eval Interval										21 DA-A	0 DA-B	21 DA-B
9	NONTREATED									0 d	0 c	0 d
LSD (P=.05)										1.9	5.5	5.8
Standard Deviation										1.1	3.2	3.4
CV										1.29	3.88	4.15
Replicate F										1.253	0.492	0.712
Replicate Prob(F)										0.3122	0.6203	0.5055
Treatment F										2554.771	287.593	250.733
Treatment Prob(F)										0.0001	0.0001	0.0001

BASF Burndown and Residual in Soybean.

Trial ID: 12-FagerS-BASF-BD
Location: Murphysboro, IL
Investigator: Bryan Young

Pest Code									AMATA-HR	AMATA-HR	AMATA-HR
Crop Code											
Rating Date									5-15-12	6-5-12	6-26-12
Rating Type									Control	Control	Control
Rating Unit									Percent	Percent	Percent
Rating Timing										42 DA-A	63 DA-A
Trt-Eval Interval									21 DA-A	0 DA-B	21 DA-B
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
1	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	7-10DBP	A	31 b	0 e	63 de
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			
2	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	7-10DBP	A	98 a	92 a	92 a
	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			
3	OPTILL PRO (CO-PACK)							7-10DBP	A	95 a	79 b	81 bc
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	7-10DBP	A			
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			
4	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	7-10DBP	A	95 a	70 c	73 cd
	PROWL H2O	3.8	CS	1.19	lb ai/a	2.5	pt/a	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			
5	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	7-10DBP	A	97 a	55 d	62 e
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			
6	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	7-10DBP	A	96 a	88 a	88 ab
	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			
7	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	7-10DBP	A	95 a	78 bc	82 abc
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			
8	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	7-10DBP	A	95 a	91 a	91 ab
	FIERCE XLT	55.68	WG	0.104	lb ai/a	3	oz/a	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7-10DBP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7-10DBP	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8WA-A	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8WA-A	B			

BASF Burndown and Residual in Soybean.

Trial ID: 12-FagerS-BASF-BD
Location: Murphysboro, IL
Investigator: Bryan Young

Pest Code									AMATA-HR	AMATA-HR	AMATA-HR
Crop Code											
Rating Date									5-15-12	6-5-12	6-26-12
Rating Type									Control	Control	Control
Rating Unit									Percent	Percent	Percent
Rating Timing										42 DA-A	63 DA-A
Trt-Eval Interval									21 DA-A	0 DA-B	21 DA-B
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code		
9	NONTREATED								0 b	0 e	0 f
LSD (P=.05)									32.8	7.9	11.1
Standard Deviation									19.0	4.5	6.4
CV									24.25	7.39	9.13
Replicate F									0.460	0.293	1.999
Replicate Prob(F)									0.6395	0.7501	0.1679
Treatment F									11.048	196.182	59.610
Treatment Prob(F)									0.0001	0.0001	0.0001

Southern Illinois University

BASF Burndown and Residual in Soybean.

Trial ID: 12-FagerS-BASF-BD
Location: Murphysboro, IL
Investigator: Bryan Young

Trial Comments

1. Protocol: BASF.
2. Ratings: CI 5-7 DAE. WC 21-28 DA-A and at 0 and 21-28 DA-B.
3. Application A timing should be 8 inch or less marestail.
4. ERICA-HR = Herbicide-resistant marestail (glyphosate).
   AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
5. Not harvested.

BASF Soybean Residual Programs Comparison.

Trial ID: 12-FagerS-BASF-Program
Location: Murphysboro, IL
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-1-12

Trial Location

City: Murphysboro
State/Prov.: IL
Postal Code: 62966
Country: USA

Objectives:
Evaluate control of glyphosate-resistant waterhemp with various programs including
total postemergence without residual, preemergence, and preemergence followed by postemergence residual.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 5-1-12
Planting Method: SEEDED Seeded **Rate, Unit:** 155000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.87 **Texture:** SIL SILT LOAM
pH: 5.5 **Soil Name:** ALVIN
CEC: 7.06

Additional Measured Elements

Element	Quantity	Unit
P1	172	LB/A
K	446	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

BASF Soybean Residual Programs Comparison.

Trial ID: 12-FagerS-BASF-Program
Location: Murphysboro, IL

Investigator: Bryan Young

Application Description

	A	B	C	D
Application Date:	5-2-12	5-22-12	6-5-12	6-5-12
Time of Day:	7:30	8:00	8:30	8:30
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	PRE	2-4"WH-1	2-4"WH-2	2-4"RG
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	JRK	RJW	RJW	RJW
Air Temperature, Unit:	74 F	58 F	70 F	70 F
% Relative Humidity:	76	80	60	60
Wind Velocity, Unit:	4 MPH	2 MPH	4 MPH	4 MPH
Wind Direction:	S	N	N	N
Dew Presence (Y/N):	Y yes	Y yes	Y yes	Y yes
Soil Temperature, Unit:	69 F	66 F	71 F	71 F
Soil Moisture:	NORMAL	NORMAL	NORMAL	NORMAL
% Cloud Cover:	0	0	0	0
Next Rain Occurred On:	5-6-12	5-31-12	6-11-12	6-11-12

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC	DESC	DESC
Stage Majority, Percent:	NA	V1	V4	V4
Stage Minimum, Percent:		V1	V3	V3
Stage Maximum, Percent:		V1	V4	V4
Height, Unit:		4 IN	8 IN	8 IN
Height Minimum, Maximum:		2 4	6 8	6 8

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	AMATA W DESC	AMATA W DESC	AMATA W DESC	AMATA W DESC
Stage Majority, Percent:	NA	12	14	14
Stage Minimum, Percent:		4	4	4
Stage Maximum, Percent:		16	20	20
Height, Unit:		2 IN	4 IN	4 IN
Height Minimum, Maximum:		0.5 4	0.5 8	0.5 8
Density, Unit:		10 FT2	5 FT2	5 FT2

Application Equipment

	A	B	C	D
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR	XR
Nozzle Size:	8002	8002	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA

BASF Soybean Residual Programs Comparison.

Trial ID: 12-FagerS-BASF-Program
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-20-12 Injury Percent 14 DAE 18 DA-A	GLXMA 6-5-12 Injury Percent 14 DA-B 0 DA-C	GLXMA 6-19-12 Injury Percent 14 DA-C	GLXMA 7-3-12 Injury Percent 28 DA-C
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH-1	B		0 a	0 b	0 c
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH-1	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"RG	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"RG	D				
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH-1	B		0 a	5 a	1 bc
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH-1	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"RG	D				
	ULTRA BLAZER	2	EC	0.375	lb ai/a	24	fl oz/a	2-4"RG	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"RG	D				
3	OPTILL PRO (CO-PACK)							PRE	A	0 b	0 a	5 a	2 ab
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A				
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH-2	C				
	ULTRA BLAZER	2	EC	0.375	lb ai/a	24	fl oz/a	2-4"WH-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH-2	C				
4	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	PRE	A	0 b	0 a	5 a	3 a
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH-2	C				
	ULTRA BLAZER	2	EC	0.375	lb ai/a	24	fl oz/a	2-4"WH-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH-2	C				
5	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	PRE	A	0 b	0 a	5 a	3 a
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	PRE	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH-2	C				
	ULTRA BLAZER	2	EC	0.375	lb ai/a	24	fl oz/a	2-4"WH-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH-2	C				
6	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	2 a	0 a	5 a	2 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH-2	C				
	ULTRA BLAZER	2	EC	0.375	lb ai/a	24	fl oz/a	2-4"WH-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH-2	C				
7	FIERCE XLT	55.68	WG	0.104	lb ai/a	3	oz/a	PRE	A	0 b	0 a	5 a	2 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH-2	C				
	ULTRA BLAZER	2	EC	0.375	lb ai/a	24	fl oz/a	2-4"WH-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH-2	C				
8	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	0 b	0 a	5 a	2 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH-2	C				
	ULTRA BLAZER	2	EC	0.375	lb ai/a	24	fl oz/a	2-4"WH-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH-2	C				
9	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	0 b	0 a	5 a	2 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH-2	C				
	ULTRA BLAZER	2	EC	0.375	lb ai/a	24	fl oz/a	2-4"WH-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH-2	C				
10	OPTILL PRO (CO-PACK)							PRE	A	0 b	0 a	5 a	2 ab
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A				
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A				
	ZIDUA	85	WG	0.08	lb ai/a	1.5	oz/a	2-4"WH-2	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH-2	C				
	ULTRA BLAZER	2	EC	0.375	lb ai/a	24	fl oz/a	2-4"WH-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH-2	C				

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

BASF Soybean Residual Programs Comparison.

Trial ID: 12-FagerS-BASF-Program
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-20-12 Injury Percent 14 DAE 18 DA-A	GLXMA 6-5-12 Injury Percent 14 DA-B 0 DA-C	GLXMA 6-19-12 Injury Percent 14 DA-C	GLXMA 7-3-12 Injury Percent 28 DA-C
11	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	0 b	0 a	5 a	3 a
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	2-4"WH-2	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH-2	C				
	ULTRA BLAZER	2	EC	0.375	lb ai/a	24	fl oz/a	2-4"WH-2	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH-2	C				
12	NONTREATED									0 b	0 a	0 b	0 c
LSD (P=.05)										0.9	0.0	0.0	1.6
Standard Deviation										0.5	0.0	0.0	1.0
CV										273.86	0.0	0.0	49.08
Replicate F										1.000	0.000	0.000	0.030
Replicate Prob(F)										0.3874	1.0000	1.0000	0.9708
Treatment F										4.000	0.000	0.000	3.523
Treatment Prob(F)										0.0060	1.0000	1.0000	0.0058

BASF Soybean Residual Programs Comparison.

Trial ID: 12-FagerS-BASF-Program
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 6-5-12 Control Percent 14 DA-B 0 DA-C	AMATA-HR 6-19-12 Control Percent 14 DA-C	AMATA-HR 7-3-12 Control Percent 28 DA-C
1	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH-1	B	57 d	52 e	53 d
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH-1	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"RG	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"RG	D			
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH-1	B	52 d	57 e	57 d
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH-1	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"RG	D			
	ULTRA BLAZER	2	EC	0.375	lb ai/a	24	fl oz/a	2-4"RG	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"RG	D			
3	OPTILL PRO (CO-PACK)							PRE	A	86 ab	92 abc	89 ab
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A			
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH-2	C			
	ULTRA BLAZER	2	EC	0.375	lb ai/a	24	fl oz/a	2-4"WH-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH-2	C			
4	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	PRE	A	87 ab	94 a	92 a
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH-2	C			
	ULTRA BLAZER	2	EC	0.375	lb ai/a	24	fl oz/a	2-4"WH-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH-2	C			
5	VERDICT	5.57	EC	0.218	lb ai/a	5	fl oz/a	PRE	A	94 a	96 a	96 a
	ZIDUA	85	WG	0.106	lb ai/a	2	oz/a	PRE	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH-2	C			
	ULTRA BLAZER	2	EC	0.375	lb ai/a	24	fl oz/a	2-4"WH-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH-2	C			
6	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	PRE	A	92 a	96 a	95 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH-2	C			
	ULTRA BLAZER	2	EC	0.375	lb ai/a	24	fl oz/a	2-4"WH-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH-2	C			
7	FIERCE XLT	55.68	WG	0.104	lb ai/a	3	oz/a	PRE	A	89 a	93 ab	92 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH-2	C			
	ULTRA BLAZER	2	EC	0.375	lb ai/a	24	fl oz/a	2-4"WH-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH-2	C			
8	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	75 c	72 d	73 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH-2	C			
	ULTRA BLAZER	2	EC	0.375	lb ai/a	24	fl oz/a	2-4"WH-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH-2	C			
9	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	A	78 c	80 cd	78 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH-2	C			
	ULTRA BLAZER	2	EC	0.375	lb ai/a	24	fl oz/a	2-4"WH-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH-2	C			
10	OPTILL PRO (CO-PACK)							PRE	A	90 a	95 a	94 a
	OPTILL	68	WG	0.085	lb ai/a	2	oz/a	PRE	A			
	OUTLOOK	6	EC	0.47	lb ai/a	10	fl oz/a	PRE	A			
	ZIDUA	85	WG	0.08	lb ai/a	1.5	oz/a	2-4"WH-2	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH-2	C			
	ULTRA BLAZER	2	EC	0.375	lb ai/a	24	fl oz/a	2-4"WH-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH-2	C			

BASF Soybean Residual Programs Comparison.

Trial ID: 12-FagerS-BASF-Program
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR	AMATA-HR	AMATA-HR
	Pest Code									AMATA-HR	AMATA-HR	AMATA-HR
	Crop Code											
	Rating Date									6-5-12	6-19-12	7-3-12
	Rating Type									Control	Control	Control
	Rating Unit									Percent	Percent	Percent
	Rating Timing									14 DA-B		
	Trt-Eval Interval									0 DA-C	14 DA-C	28 DA-C
11	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	PRE	A	79 bc	81 bcd	81 bc
	WARRANT	3	CS	1.13	lb ai/a	3	pt/a	2-4"WH-2	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	2-4"WH-2	C			
	ULTRA BLAZER	2	EC	0.375	lb ai/a	24	fl oz/a	2-4"WH-2	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	2-4"WH-2	C			
12	NONTREATED									0 e	0 f	0 e
	LSD (P=.05)									8.3	12.0	10.3
	Standard Deviation									4.9	7.1	6.1
	CV									6.7	9.41	8.14
	Replicate F									2.178	1.447	0.695
	Replicate Prob(F)									0.1371	0.2568	0.5096
	Treatment F									88.690	47.517	61.847
	Treatment Prob(F)									0.0001	0.0001	0.0001

Southern Illinois University

BASF Soybean Residual Programs Comparison.

Trial ID: 12-FagerS-BASF-Program
Location: Murphysboro, IL

Investigator: Bryan Young

Trial Comments

1. Protocol: BASF.
2. Ratings: CI at 14 DAE and 0, 14, and 28 DA-C. WC at 0, 14, and 28 DA-C.
3. Take photos at 0 and 14-28 DA-C.
4. Blanket burndown application of Intimidator Plus (48 floz/A) and 2,4-D (1 pt/A) was applied at 14 DBP, on 4-17-12.
5. Blanket burndown application of Gramoxone Inteon (4 pt/A) plus NIS (0.5%) was applied at planting on 5-1-12.
6. No yield data necessary.
7. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
8. Not harvested.

Burndown and Residual Programs for Glyphosate-Resistant Horseweed.

Trial ID: 12-FagerS-BDresid
Location: Murphysboro, IL
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-17-12

Trial Location

City: Murphysboro
State/Prov.: IL
Postal Code: 62966
Country: USA

Objectives:
Evaluate burndown and residual herbicide combinations for control of glyohosate-resistant horseweed and waterhemp.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 4-23-12
Planting Method: SEEDED Seeded **Rate, Unit:** 155000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** ERICA - Conyza canadensis (L.) Crong.
Common Name: horseweed
Description: glyphosate-resistant marestail

Pest 2 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.87 **Texture:** SIL SILT LOAM
pH: 5.5 **Soil Name:** ALVIN
CEC: 7.06

Additional Measured Elements

Element	Quantity	Unit
P1	172	LB/A
K	446	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

Burndown and Residual Programs for Glyphosate-Resistant Horseweed.

Trial ID: 12-FagerS-BDresid
Location: Murphysboro, IL
Investigator: Bryan Young

Application Description

	A	B	C
Application Date:	4-17-12	4-22-12	6-13-12
Time of Day:	12:00	7:30	8:00
Application Method:	Spray	Spray	Spray
Application Timing:	6-12"MT	V2-V3	V6
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	LAH	LAH	RJW
Air Temperature, Unit:	67 F	58 F	70 F
% Relative Humidity:	48	80	76
Wind Velocity, Unit:	4 MPH	2 MPH	2 MPH
Wind Direction:	E	N	NW
Dew Presence (Y/N):	N no	Y yes	N no
Soil Temperature, Unit:	61 F	66 F	63 F
Soil Moisture:	ABONOR	NORMAL	NORMAL
% Cloud Cover:	100	0	10
Next Rain Occurred On:	4-20-12	4-30-12	6-17-12

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	V3	V6
Stage Minimum, Percent:		V2	V5
Stage Maximum, Percent:		V3	V6
Height, Unit:		6 IN	12 IN
Height Minimum, Maximum:		3 6	10 12

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	ERICA W DESC	ERICA W DESC	ERICA W DESC
Stage Majority, Percent:	35	10	NA
Stage Minimum, Percent:	2	8	
Stage Maximum, Percent:	50+	18	
Height, Unit:	8 IN	4 IN	
Height Minimum, Maximum:	0.5 12	4 8	
Density, Unit:	10 FT2	0.01 FT2	
Pest 2 Code, Type, Scale:	AMATA W DESC	AMATA W DESC	AMATA W DESC
Stage Majority, Percent:	NA	8	16
Stage Minimum, Percent:		Coty	4
Stage Maximum, Percent:		14	50+
Height, Unit:		4 IN	6 IN
Height Minimum, Maximum:		0.25 8	1 18
Density, Unit:		0.1 FT2	0.5 FT2

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan
Nozzle Size:	XR 8002	XR 8002	XR 8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Burndown and Residual Programs for Glyphosate-Resistant Horseweed.

Trial ID: 12-FagerS-BDresid
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-8-12 Injury Percent 14 DAP 16 DA-B	GLXMA 5-22-12 Injury Percent 28 DAP 30 DA-B	GLXMA 6-19-12 Injury Percent 56 DAP 6 DA-C
1	NONTREATED									0 a	0 a	0 d
2	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	6-12"MT	A	0 a	0 a	0 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-12"MT	A			
	MSO (MSO ULTRA)	100	SL	1	qt/a	1	qt/a	6-12"MT	A			
	AMS	100	SG	2.5	lb/a	2.5	lb/a	6-12"MT	A			
3	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	6-12"MT	A	0 a	0 a	0 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-12"MT	A			
	MSO (MSO ULTRA)	100	SL	1	qt/a	1	qt/a	6-12"MT	A			
	AMS	100	SG	2.5	lb/a	2.5	lb/a	6-12"MT	A			
4	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	6-12"MT	A	0 a	0 a	0 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-12"MT	A			
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	6-12"MT	A			
	MSO (MSO ULTRA)	100	SL	1	qt/a	1	qt/a	6-12"MT	A			
	AMS	100	SG	2.5	lb/a	2.5	lb/a	6-12"MT	A			
5	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	6-12"MT	A	0 a	0 a	0 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-12"MT	A			
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	6-12"MT	A			
	MSO (MSO ULTRA)	100	SL	1	qt/a	1	qt/a	6-12"MT	A			
	AMS	100	SG	2.5	lb/a	2.5	lb/a	6-12"MT	A			
6	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	6-12"MT	A	0 a	0 a	0 d
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	6-12"MT	A			
	AMS	100	SG	3	lb/a	3	lb/a	6-12"MT	A			
7	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	6-12"MT	A	0 a	0 a	0 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-12"MT	A			
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-12"MT	A			
	AMS	100	SG	3	lb/a	3	lb/a	6-12"MT	A			
8	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	6-12"MT	A	0 a	0 a	0 d
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	6-12"MT	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	6-12"MT	A			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	6-12"MT	A			
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	V2-V3	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	B			
9	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	6-12"MT	A	0 a	0 a	5 b
	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	6-12"MT	A			
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	6-12"MT	A			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	6-12"MT	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	6-12"MT	A			
	FLEXSTAR GT 3.5	2.82	SL	1.23	lb ae/a	3.5	pt/a	V2-V3	B			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V2-V3	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	B			
10	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	6-12"MT	A	0 a	0 a	15 a
	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	6-12"MT	A			
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	6-12"MT	A			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	6-12"MT	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	6-12"MT	A			
	SEQUENCE	5.25	SL	1.64	lb ae/a	2.5	pt/a	V2-V3	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	B			
	FLEXSTAR GT 3.5	2.82	SL	1.23	lb ae/a	3.5	pt/a	V6	C			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V6	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V6	C			

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Burndown and Residual Programs for Glyphosate-Resistant Horseweed.

Trial ID: 12-FagerS-BDresid
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-8-12 Injury Percent 14 DAP 16 DA-B	GLXMA 5-22-12 Injury Percent 28 DAP 30 DA-B	GLXMA 6-19-12 Injury Percent 56 DAP 6 DA-C
11	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	6-12"MT	A	0 a	0 a	4 c
	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	6-12"MT	A			
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	6-12"MT	A			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	6-12"MT	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	6-12"MT	A			
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	V2-V3	B			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2-V3	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	B			
LSD (P=.05)										0.0	0.0	0.6
Standard Deviation										0.0	0.0	0.3
CV										0.0	0.0	15.74
Replicate F										0.000	0.000	1.000
Replicate Prob(F)										1.0000	1.0000	0.3855
Treatment F										0.000	0.000	532.000
Treatment Prob(F)										1.0000	1.0000	0.0001

Burndown and Residual Programs for Glyphosate-Resistant Horseweed.

Trial ID: 12-FagerS-BDresid
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR 5-8-12 Control Percent 14 DAP 16 DA-B	ERICA-HR 5-22-12 Control Percent 28 DAP 30 DA-B	ERICA-HR 6-19-12 Control Percent 56 DAP 6 DA-C	AMATA-HR 5-22-12 Control Percent 28 DAP 30 DA-B	AMATA-HR 6-19-12 Control Percent 56 DAP 6 DA-C
1	NONTREATED									0 e	0 c	0 c	0 d	0 d
2	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	6-12"MT	A	89 d	87 b	62 b	78 bc	63 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-12"MT	A					
	MSO (MSO ULTRA)	100	SL	1	qt/a	1	qt/a	6-12"MT	A					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	6-12"MT	A					
3	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	6-12"MT	A	92 c	88 b	65 b	80 b	65 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-12"MT	A					
	MSO (MSO ULTRA)	100	SL	1	qt/a	1	qt/a	6-12"MT	A					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	6-12"MT	A					
4	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	6-12"MT	A	99 ab	98 a	96 a	85 ab	43 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-12"MT	A					
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	6-12"MT	A					
	MSO (MSO ULTRA)	100	SL	1	qt/a	1	qt/a	6-12"MT	A					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	6-12"MT	A					
5	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	6-12"MT	A	99 ab	97 a	97 a	90 a	53 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-12"MT	A					
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	6-12"MT	A					
	MSO (MSO ULTRA)	100	SL	1	qt/a	1	qt/a	6-12"MT	A					
	AMS	100	SG	2.5	lb/a	2.5	lb/a	6-12"MT	A					
6	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	6-12"MT	A	97 ab	96 a	93 a	84 ab	58 bc
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	6-12"MT	A					
	AMS	100	SG	3	lb/a	3	lb/a	6-12"MT	A					
7	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	6-12"MT	A	96 b	94 a	89 a	84 ab	50 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-12"MT	A					
	LIBERTY 280	2.34	EC	0.402	lb ai/a	22	fl oz/a	6-12"MT	A					
	AMS	100	SG	3	lb/a	3	lb/a	6-12"MT	A					
8	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	6-12"MT	A	96 b	95 a	95 a	91 a	90 a
	PREFIX	5.29	EC	1.32	lb ai/a	2	pt/a	6-12"MT	A					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	6-12"MT	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	6-12"MT	A					
	TOUCHDOWN TOTAL	4.17	SL	0.78	lb ae/a	24	fl oz/a	V2-V3	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	B					
9	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	6-12"MT	A	99 a	97 a	98 a	92 a	94 a
	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	6-12"MT	A					
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	6-12"MT	A					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	6-12"MT	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	6-12"MT	A					
	FLEXSTAR GT 3.5	2.82	SL	1.23	lb ae/a	3.5	pt/a	V2-V3	B					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V2-V3	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	B					
10	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	6-12"MT	A	98 ab	97 a	98 a	72 c	94 a
	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	6-12"MT	A					
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	6-12"MT	A					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	6-12"MT	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	6-12"MT	A					
	SEQUENCE	5.25	SL	1.64	lb ae/a	2.5	pt/a	V2-V3	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	B					
	FLEXSTAR GT 3.5	2.82	SL	1.23	lb ae/a	3.5	pt/a	V6	C					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	V6	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V6	C					

Burndown and Residual Programs for Glyphosate-Resistant Horseweed.

Trial ID: 12-FagerS-BDresid
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR	ERICA-HR	ERICA-HR	AMATA-HR	AMATA-HR
	Pest Code									ERICA-HR	ERICA-HR	ERICA-HR	AMATA-HR	AMATA-HR
	Crop Code													
	Rating Date									5-8-12	5-22-12	6-19-12	5-22-12	6-19-12
	Rating Type									Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent
	Rating Timing									14 DAP	28 DAP	56 DAP	28 DAP	56 DAP
	Trt-Eval Interval									16 DA-B	30 DA-B	6 DA-C	30 DA-B	6 DA-C
11	GRAMOXONE 2 SL	2	SL	1	lb ai/a	64	fl oz/a	6-12"MT	A	98 ab	97 a	98 a	91 a	92 a
	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	6-12"MT	A					
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	6-12"MT	A					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	6-12"MT	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	6-12"MT	A					
	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	V2-V3	B					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	V2-V3	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V3	B					
	LSD (P=.05)									2.6	4.9	10.7	8.0	20.8
	Standard Deviation									1.5	2.9	6.3	4.7	12.2
	CV									1.71	3.31	7.75	6.14	19.14
	Replicate F									0.497	0.582	0.429	7.022	1.228
	Replicate Prob(F)									0.6155	0.5682	0.6569	0.0049	0.3140
	Treatment F									1136.750	305.441	68.127	92.849	16.287
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Burndown and Residual Programs for Glyphosate-Resistant Horseweed.

Trial ID: 12-FagerS-BDresid
Location: Murphysboro, IL
Investigator: Bryan Young

Trial Comments

1. Protocol: Valent (Valor MD64.01), Syngenta (HSC051A4).
2. Ratings: CI/WC 14, 28, and 56 DAP.
3. Trial should be planted within 7 days of application "A".
4. Possible POST application of glyphosate to treatments 2-7 after 14 DAP rating, to be determined.
5. ERICA-HR = Herbicide-resistant marestail (glyphosate).
   AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
   DAP = Days after planting.
6. Not harvested.

Southern Illinois University

Burndown of Glyphosate-Resistant Waterhemp with Sharpen.

Trial ID: 12-FagerS-SharpAMATA
Location: Murphysboro, IL
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 8-30-12

Trial Location

City: Murphysboro
State/Prov.: IL
Postal Code: 62966
Country: USA

Objectives:
Opimize the foliar efficacy of Sharpen
on glyphostae-resistant waterhemp.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: YACKR Arable land Arable land
Variety: NON-CROP
Planting Method: NA - Not-Applicable

Pest Description

Pest 1 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD
Plot Length, Unit: 25 FT
Plot Area, Unit: 250 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	NONE	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.87 **Texture:** SIL SILT LOAM
pH: 5.5 **Soil Name:** ALVIN
CEC: 7.06

Additional Measured Elements

Element	Quantity	Unit
P1	172	LB/A
K	446	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

Burndown of Glyphosate-Resistant Waterhemp with Sharpen.

Trial ID: 12-FagerS-SharpAMATA
Location: Murphysboro, IL
Investigator: Bryan Young

Application Description

	A
Application Date:	8-30-12
Time of Day:	9:00
Application Method:	Spray
Application Timing:	6-8"W
Application Placement:	BROFOL
Applied By:	RJW
Air Temperature, Unit:	82 F
% Relative Humidity:	69
Wind Velocity, Unit:	2 MPH
Wind Direction:	S
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	80 F
Soil Moisture:	BELNOR
% Cloud Cover:	0
Next Rain Occurred On:	8-31-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	YACKR
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMATA W DESC
Stage Majority, Percent:	10
Stage Minimum, Percent:	Coty
Stage Maximum, Percent:	18
Height, Unit:	6 IN
Height Minimum, Maximum:	0.5 12
Density, Unit:	10 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	See
Nozzle Size:	comment
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

Burndown of Glyphosate-Resistant Waterhemp with Sharpen.

Trial ID: 12-FagerS-SharpAMATA
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 9-1-12 Control Percent 2 DA-A	AMATA-HR 9-6-12 Control Percent 7 DA-A	AMATA-HR 9-13-12 Control Percent 14 DA-A	AMATA-HR 9-27-12 Control Percent 28 DA-A
1	XR 11002									40 cd	47 cd	45 de	42 f
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	6-8"W	A				
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	6-8"W	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A				
2	XR 11002									42 cd	52 c	50 d	52 de
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	6-8"W	A				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	6-8"W	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A				
3	XR 11002									38 d	45 cd	43 de	43 ef
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	6-8"W	A				
	DESTINY HC	100	SL	0.5	% v/v	0.5	% v/v	6-8"W	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A				
4	XR 11002									20 e	38 d	38 e	40 f
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"W	A				
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	6-8"W	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A				
5	XR 11002									45 bcd	47 cd	52 d	53 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"W	A				
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	6-8"W	A				
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	6-8"W	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A				
6	XR 11002									52 bc	67 b	68 bc	66 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"W	A				
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	6-8"W	A				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	6-8"W	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A				
7	XR 11002									47 bcd	68 b	65 c	58 cd
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"W	A				
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	6-8"W	A				
	DESTINY HC	100	SL	0.5	% v/v	0.5	% v/v	6-8"W	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A				
8	XR 11002									55 b	65 b	63 c	61 cd
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"W	A				
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	6-8"W	A				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	6-8"W	A				
9	XR 11002									94 a	98 a	98 a	98 a
	GRAMOXONE 2 SL	2	SL	0.625	lb ai/a	2.5	pt/a	6-8"W	A				
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	6-8"W	A				
	NIS (ACTIVATOR 90)	100	SL	0.5	% v/v	0.5	% v/v	6-8"W	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A				
10	XR 11002									94 a	98 a	99 a	99 a
	GRAMOXONE 2 SL	2	SL	0.625	lb ai/a	2.5	pt/a	6-8"W	A				
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	6-8"W	A				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	6-8"W	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A				
11	NONTREATED									0 f	0 e	0 f	0 g

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Burndown of Glyphosate-Resistant Waterhemp with Sharpen.

Trial ID: 12-FagerS-SharpAMATA
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
	Pest Code									AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
	Crop Code												
	Rating Date									9-1-12	9-6-12	9-13-12	9-27-12
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing												
	Trt-Eval Interval									2 DA-A	7 DA-A	14 DA-A	28 DA-A
12	TTI 11002									57 b	75 b	75 b	73 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-8"W	A				
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	6-8"W	A				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	6-8"W	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	6-8"W	A				
	LSD (P=.05)									11.7	12.6	9.3	9.8
	Standard Deviation									6.9	7.4	5.5	5.8
	CV									14.24	12.75	9.48	10.12
	Replicate F									0.907	3.410	1.938	1.687
	Replicate Prob(F)									0.4181	0.0513	0.1678	0.2082
	Treatment F									43.556	39.327	72.005	63.870
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Burndown of Glyphosate-Resistant Waterhemp with Sharpen.

Trial ID: 12-FagerS-SharpAMATA
Location: Murphysboro, IL
Investigator: Bryan Young

Trial Comments

1. Protocol: SIU.
2. Ratings: WC at 7, 14, and 28 DAT;
   Note the speed of foliar burn at 2 and 4 DAT.
   Photos as appropriate.
3. Spray nozzles are per treatment, see treatment list.
4. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
5. There were no evaluations made at 4 DA-A.
6. Not harvested, non-crop.

Southern Illinois University

Glyphosate-Resistant Weed Burndown - DuPont.

Trial ID: 12-FagerS-DuPontBD
Location: Murphysboro, IL
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-17-12

Trial Location

City: Murphysboro
State/Prov.: IL
Postal Code: 62966
Country: USA

Objectives:
Evaluate Canopy, Canopy EX and Envive plus Sharpen
for burndown of glyphosate-resistant weeds.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 5-1-12
Planting Method: SEEDED Seeded **Rate, Unit:** 155000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** ERICA - Conyza canadensis (L.) Crong.
Common Name: horseweed
Description: glyphosate-resistant marestail

Pest 2 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.87 **Texture:** SIL SILT LOAM
pH: 5.5 **Soil Name:** ALVIN
CEC: 7.06

Additional Measured Elements

Element	Quantity	Unit
P1	172	LB/A
K	446	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

Glyphosate-Resistant Weed Burndown - DuPont.

Trial ID: 12-FagerS-DuPontBD
Location: Murphysboro, IL
Investigator: Bryan Young

Application Description

	A	B	C
Application Date:	4-17-12	5-2-12	5-29-12
Time of Day:	12:30	8:00	14:45
Application Method:	Spray	Spray	Spray
Application Timing:	14EPP	PRE	28DAP
Application Placement:	BROFOL	BROFOL	BROFOL
Applied By:	JRK	JRK	RJW
Air Temperature, Unit:	67 F	74 F	89 F
% Relative Humidity:	48	76	37
Wind Velocity, Unit:	4 MPH	4 MPH	4 MPH
Wind Direction:	E	S	SE
Dew Presence (Y/N):	N no	Y yes	N no
Soil Temperature, Unit:	61 F	69 F	83 F
Soil Moisture:	ABONOR	NORMAL	NORMAL
% Cloud Cover:	100	0	0
Next Rain Occurred On:	4-27-12	5-6-12	5-31-12

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC	DESC
Stage Majority, Percent:	NA	NA	V3
Stage Minimum, Percent:			V2
Stage Maximum, Percent:			V3
Height, Unit:			8 IN
Height Minimum, Maximum:			6 8

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale:	ERICA W DESC	ERICA W DESC	ERICA W DESC
Stage Majority, Percent:	35	40	20
Stage Minimum, Percent:	2	6	12
Stage Maximum, Percent:	50+	50+	40
Height, Unit:	8 IN	10 IN	8 IN
Height Minimum, Maximum:	0.5 12	1 19	4 16
Density, Unit:	10 FT2	10 FT2	10 FT2
Pest 2 Code, Type, Scale:	AMATA W DESC	AMATA W DESC	AMATA W DESC
Stage Majority, Percent:	NA	NA	8
Stage Minimum, Percent:			4
Stage Maximum, Percent:			12
Height, Unit:			4 IN
Height Minimum, Maximum:			1 8
Density, Unit:			0.5 FT2

Application Equipment

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

Glyphosate-Resistant Weed Burndown - DuPont.

Trial ID: 12-FagerS-DuPontBD
Location: Murphysboro, IL
Investigator: Bryan Young

Pest Code Crop Code Rating Date Rating Type Rating Unit Rating Timing Trt-Eval Interval									GLXMA 5-15-12 Injury Percent 14 DAP 13 DA-B	GLXMA 5-29-12 Injury Percent 28 DAP 27 DA-B	GLXMA 6-26-12 Injury Percent 28 DA-C
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
1	CANOPY EX	29.5	WG	0.0277	lb ai/a	1.5	oz/a	14EPP	A	0 a	0 a	0 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	14EPP	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	14EPP	A			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	14EPP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	14EPP	A			
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C			
2	CANOPY EX	29.5	WG	0.0277	lb ai/a	1.5	oz/a	14EPP	A	0 a	0 a	0 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	14EPP	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	14EPP	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	14EPP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	14EPP	A			
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C			
3	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	14EPP	A	0 a	0 a	0 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	14EPP	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	14EPP	A			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	14EPP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	14EPP	A			
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C			
4	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	14EPP	A	0 a	0 a	0 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	14EPP	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	14EPP	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	14EPP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	14EPP	A			
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C			
5	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	14EPP	A	0 a	0 a	0 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	14EPP	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	14EPP	A			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	14EPP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	14EPP	A			
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C			
6	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	14EPP	A	0 a	0 a	0 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	14EPP	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	14EPP	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	14EPP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	14EPP	A			
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C			
7	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	14EPP	A	0 a	0 a	0 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	14EPP	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	14EPP	A			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	14EPP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	14EPP	A			
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C			

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Glyphosate-Resistant Weed Burndown - DuPont.

Trial ID: 12-FagerS-DuPontBD
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-15-12 Injury Percent 14 DAP 13 DA-B	GLXMA 5-29-12 Injury Percent 28 DAP 27 DA-B	GLXMA 6-26-12 Injury Percent 28 DA-C
	Pest Code											
	Crop Code											
	Rating Date									5-15-12	5-29-12	6-26-12
	Rating Type									Injury	Injury	Injury
	Rating Unit									Percent	Percent	Percent
	Rating Timing									14 DAP	28 DAP	
	Trt-Eval Interval									13 DA-B	27 DA-B	28 DA-C
8	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	14EPP	A	0 a	0 a	0 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	14EPP	A			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	14EPP	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	14EPP	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	14EPP	A			
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C			
9	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B	0 a	0 a	0 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE	B			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	B			
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C			
10	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	PRE	B	0 a	0 a	0 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE	B			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	B			
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C			
11	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	B	0 a	0 a	0 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE	B			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	B			
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C			
12	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B	0 a	0 a	0 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	B			
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C			
13	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	PRE	B	0 a	0 a	0 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	B			
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C			
14	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	B	0 a	0 a	0 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	B			
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C			
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C			
15	NONTREATED									0 a	0 a	0 a
	LSD (P=.05)									0.0	0.0	0.0
	Standard Deviation									0.0	0.0	0.0
	CV									0.0	0.0	0.0
	Replicate F									0.000	0.000	0.000
	Replicate Prob(F)									1.0000	1.0000	1.0000
	Treatment F									0.000	0.000	0.000
	Treatment Prob(F)									1.0000	1.0000	1.0000

Glyphosate-Resistant Weed Burndown - DuPont.

Trial ID: 12-FagerS-DuPontBD
Location: Murphysboro, IL
Investigator: Bryan Young

Pest Code									ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR	AMATA-HR	AMATA-HR
Crop Code														
Rating Date									5-1-12	5-15-12	5-29-12	6-26-12	5-29-12	6-26-12
Rating Type									Control	Control	Control	Control	Control	Control
Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing									O DAP	14 DAP	28 DAP		28 DAP	
Trt-Eval Interval									14 DA-A	13 DA-B	27 DA-B	28 DA-C	27 DA-B	28 DA-C
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
1	CANOPY EX	29.5	WG	0.0277	lb ai/a	1.5	oz/a	14EPP	A	92 b	97 ab	95 a	94 ab	74 e	77 de
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	14EPP	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	14EPP	A						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	14EPP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	14EPP	A						
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C						
2	CANOPY EX	29.5	WG	0.0277	lb ai/a	1.5	oz/a	14EPP	A	71 de	95 ab	97 a	98 a	77 de	77 de
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	14EPP	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	14EPP	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	14EPP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	14EPP	A						
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C						
3	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	14EPP	A	97 a	97 ab	96 a	96 ab	84 cd	83 cd
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	14EPP	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	14EPP	A						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	14EPP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	14EPP	A						
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C						
4	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	14EPP	A	68 e	94 ab	96 a	96 ab	78 de	74 e
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	14EPP	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	14EPP	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	14EPP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	14EPP	A						
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C						
5	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	14EPP	A	94 ab	98 a	97 a	96 ab	90 bc	92 ab
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	14EPP	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	14EPP	A						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	14EPP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	14EPP	A						
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C						
6	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	14EPP	A	80 c	97 ab	96 a	96 ab	85 cd	87 bc
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	14EPP	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	14EPP	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	14EPP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	14EPP	A						
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C						
7	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	14EPP	A	96 a	98 ab	96 a	93 bc	91 abc	92 ab
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	14EPP	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	14EPP	A						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	14EPP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	14EPP	A						
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C						

Glyphosate-Resistant Weed Burndown - DuPont.

Trial ID: 12-FagerS-DuPontBD
Location: Murphysboro, IL
Investigator: Bryan Young

Pest Code									ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR	AMATA-HR	AMATA-HR
Crop Code														
Rating Date									5-1-12	5-15-12	5-29-12	6-26-12	5-29-12	6-26-12
Rating Type									Control	Control	Control	Control	Control	Control
Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing									O DAP	14 DAP	28 DAP		28 DAP	
Trt-Eval Interval									14 DA-A	13 DA-B	27 DA-B	28 DA-C	27 DA-B	28 DA-C
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
8	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	14EPP	A	73 d	94 b	96 a	95 ab	92 abc	93 ab
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	14EPP	A						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	14EPP	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	14EPP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	14EPP	A						
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C						
9	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B		97 ab	96 a	93 bc	97 ab	97 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	B						
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C						
10	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	PRE	B		97 ab	97 a	96 ab	98 ab	97 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	B						
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C						
11	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	B		97 ab	97 a	95 ab	97 ab	98 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE	B						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	B						
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C						
12	CANOPY	75	WG	0.188	lb ai/a	4	oz/a	PRE	B		77 d	78 c	88 d	98 ab	97 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	B						
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C						
13	ENVIVE	41.3	WG	0.09	lb ai/a	3.5	oz/a	PRE	B		82 c	80 bc	89 cd	97 ab	96 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	B						
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C						
14	ENVIVE	41.3	WG	0.103	lb ai/a	4	oz/a	PRE	B		81 cd	82 b	88 d	98 a	97 a
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	PRE	B						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	B						
	CINCH	7.64	SC	0.955	lb ai/a	1	pt/a	28DAP	C						
	ABUNDIT EXTRA	3	SL	0.75	lb ae/a	32	fl oz/a	28DAP	C						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	28DAP	C						
15	NONTREATED									0 f	57 e	60 d	71 e	80 de	92 ab
LSD (P=.05)										3.3	4.1	3.0	4.1	8.5	6.9
Standard Deviation										1.9	2.5	1.8	2.4	5.1	4.1
CV										2.52	2.73	2.0	2.65	5.7	4.6
Replicate F										1.012	0.338	0.993	1.032	1.182	2.344
Replicate Prob(F)										0.3857	0.7161	0.3832	0.3695	0.3215	0.1145
Treatment F										773.658	67.237	107.630	22.069	8.812	12.151
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Glyphosate-Resistant Weed Burndown - DuPont.

Trial ID: 12-FagerS-DuPontBD
Location: Murphysboro, IL
Investigator: Bryan Young

Trial Comments

1. Protocol: DuPont (USA-12-118).
2. Ratings: CI 14 and 28 DAP. WC at planting, 14 and 28 DAP, 28 DA POST.
3. Blanket application of glyphosate (Roundup WeatherMax 44 floz/A) plus AMS (17 lb/100gal) was applied at planting, 10 ft wide to all plots, on 5-1-12.
   Application C (28DAP) was applied as a blanket to all plots including the nontreated.
4. DAP = Days after planting.
5. Not harvested.

NUP-12004 Preplant Burndown in Corn.

Trial ID: 12-YRC-FP-NuFarm
Location: Young Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-18-12

Trial Location

City: Murphysboro
State/Prov.: IL
Postal Code: 62966
Country: USA

Objectives:
Evaluate efficacy of NUP-12004 as a corn preplant burndown herbicide
of grasses and glyphosate-resistant broadleaf weeds.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: DKC 61-06 **Description:** RR2/LL
BBCH Scale: BCOR **Planting Date:** 4-25-12
Planting Method: SEEDED Seeded **Rate, Unit:** 31000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** ERICA - Conyza canadensis (L.) Crong.
Common Name: horseweed
Description: glyphosate-resistant marestail

Pest 2 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Pest 3 Type: W **Code:** VERAR - Veronica arvensis L.
Common Name: speedwell, corn

Pest 4 Type: W **Code:** OXAST - Oxalis stricta L.
Common Name: woodsorrel, yellow

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 25 FT
Plot Area, Unit: 250 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 177 LB/A, P2O5 69 LB/A, K2O 90 LB/A

Soil Description

% OM: 1.82 **Texture:** SIL SILT LOAM
pH: 6.2 **Soil Name:** ALVIN
CEC: 6.16

Additional Measured Elements

Element	Quantity	Unit
P1	154	LB/A
K	264	LB/A

NUP-12004 Preplant Burndown in Corn.

Trial ID: 12-YRC-FP-NuFarm
Location: Young Res. Center
Investigator: Bryan Young

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

Application Description

	A
Application Date:	4-18-12
Time of Day:	17:00
Application Method:	Spray
Application Timing:	7DBP
Application Placement:	BROFOL
Applied By:	JRK
Air Temperature, Unit:	80 F
% Relative Humidity:	37
Wind Velocity, Unit:	0 MPH
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	69 F
Soil Moisture:	NORMAL
% Cloud Cover:	3
Next Rain Occurred On:	4-20-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMD BCOR
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A	
Pest 1 Code, Type, Scale:	ERICA	W DESC
Stage Majority, Percent:	16	
Stage Minimum, Percent:	4	
Stage Maximum, Percent:	34	
Height, Unit:	4	IN
Height Minimum, Maximum:	1	7
Density, Unit:	2	FT2
Pest 2 Code, Type, Scale:	AMATA	W DESC
Stage Majority, Percent:	4	
Stage Minimum, Percent:	Coty	
Stage Maximum, Percent:	8	
Height, Unit:	1	IN
Height Minimum, Maximum:	0.25	3
Density, Unit:	30	FT2
Pest 3 Code, Type, Scale:	VERAR	W DESC
Stage Majority, Percent:	30	
Stage Minimum, Percent:	10	
Stage Maximum, Percent:	40	
Height, Unit:	8	IN
Height Minimum, Maximum:	3	10
Density, Unit:	8	FT2
Pest 4 Code, Type, Scale:	OXAST	W DESC
Stage Majority, Percent:	2	
Stage Minimum, Percent:	2	
Stage Maximum, Percent:	4	
Height, Unit:	0.5	IN
Height Minimum, Maximum:	0.5	1
Density, Unit:	0.001	FT2

NUP-12004 Preplant Burndown in Corn.

Trial ID: 12-YRC-FP-NuFarm
Location: Young Res. Center
Investigator: Bryan Young

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

NUP-12004 Preplant Burndown in Corn.

Trial ID: 12-YRC-FP-NuFarm
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ZEAMD 5-4-12 Injury Percent 16 DA-A	ZEAMD 5-16-12 Injury Percent 28 DA-A
1	NONTREATED									0 a	0 a
2	NUP-12004	3.52	EC	0.33	lb ae/a	12	fl oz/a	7DBP	A	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A		
3	NUP-12004	3.52	EC	0.495	lb ae/a	18	fl oz/a	7DBP	A	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A		
4	WEEDONE LV 4 EC	3.84	EC	0.48	lb ae/a	16	fl oz/a	7DBP	A	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A		
5	CREDIT XTREME	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	0 a	0 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	A		
6	NUP-12004	3.52	EC	0.33	lb ae/a	12	fl oz/a	7DBP	A	0 a	0 a
	CREDIT XTREME	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A		
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	A		
7	NUP-12004	3.52	EC	0.495	lb ae/a	18	fl oz/a	7DBP	A	0 a	0 a
	CREDIT XTREME	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A		
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	A		
8	WEEDONE LV 4 EC	3.84	EC	0.48	lb ae/a	16	fl oz/a	7DBP	A	0 a	0 a
	CREDIT XTREME	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A		
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A		
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	A		
LSD (P=.05)										0.0	0.0
Standard Deviation										0.0	0.0
CV										0.0	0.0
Replicate F										0.000	0.000
Replicate Prob(F)										1.0000	1.0000
Treatment F										0.000	0.000
Treatment Prob(F)										1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

NUP-12004 Preplant Burndown in Corn.

Trial ID: 12-YRC-FP-NuFarm
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR
	Pest Code									ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR
	Crop Code												
	Rating Date									4-21-12	4-25-12	5-2-12	5-16-12
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing												
	Trt-Eval Interval									3 DA-A	7 DA-A	14 DA-A	28 DA-A
1	NONTREATED									0 d	0 e	0 d	0 d
2	NUP-12004	3.52	EC	0.33	lb ae/a	12	fl oz/a	7DBP	A	38 b	67 abc	82 ab	87 b
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A				
3	NUP-12004	3.52	EC	0.495	lb ae/a	18	fl oz/a	7DBP	A	43 a	70 ab	85 a	92 ab
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A				
4	WEEDONE LV 4 EC	3.84	EC	0.48	lb ae/a	16	fl oz/a	7DBP	A	33 c	65 bc	75 b	90 ab
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A				
5	CREDIT XTREME	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	3 d	17 d	45 c	55 c
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	A				
6	NUP-12004	3.52	EC	0.33	lb ae/a	12	fl oz/a	7DBP	A	45 a	71 ab	83 a	94 a
	CREDIT XTREME	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	A				
7	NUP-12004	3.52	EC	0.495	lb ae/a	18	fl oz/a	7DBP	A	45 a	72 a	88 a	93 ab
	CREDIT XTREME	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	A				
8	WEEDONE LV 4 EC	3.84	EC	0.48	lb ae/a	16	fl oz/a	7DBP	A	30 c	62 c	82 ab	94 a
	CREDIT XTREME	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	A				
	LSD (P=.05)									3.6	6.2	7.6	6.4
	Standard Deviation									2.0	3.5	4.3	3.7
	CV									6.85	6.65	6.39	4.85
	Replicate F									1.000	0.528	2.455	2.132
	Replicate Prob(F)									0.3927	0.6013	0.1219	0.1555
	Treatment F									238.536	190.631	150.076	246.508
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

NUP-12004 Preplant Burndown in Corn.

Trial ID: 12-YRC-FP-NuFarm
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
	Pest Code									AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
	Crop Code												
	Rating Date									4-21-12	4-25-12	5-2-12	5-16-12
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing												
	Trt-Eval Interval									3 DA-A	7 DA-A	14 DA-A	28 DA-A
1	NONTREATED									0 f	0 e	0 f	0 e
2	NUP-12004	3.52	EC	0.33	lb ae/a	12	fl oz/a	7DBP	A	50 b	77 b	88 bc	87 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A				
3	NUP-12004	3.52	EC	0.495	lb ae/a	18	fl oz/a	7DBP	A	58 a	85 a	94 a	87 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A				
4	WEEDONE LV 4 EC	3.84	EC	0.48	lb ae/a	16	fl oz/a	7DBP	A	35 c	72 bc	77 d	72 c
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A				
5	CREDIT XTREME	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	8 e	22 d	68 e	37 d
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	A				
6	NUP-12004	3.52	EC	0.33	lb ae/a	12	fl oz/a	7DBP	A	55 a	88 a	90 ab	77 bc
	CREDIT XTREME	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	A				
7	NUP-12004	3.52	EC	0.495	lb ae/a	18	fl oz/a	7DBP	A	58 a	88 a	92 ab	82 ab
	CREDIT XTREME	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	A				
8	WEEDONE LV 4 EC	3.84	EC	0.48	lb ae/a	16	fl oz/a	7DBP	A	30 d	70 c	82 cd	77 bc
	CREDIT XTREME	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	A				
	LSD (P=.05)									4.5	6.4	6.2	9.8
	Standard Deviation									2.6	3.6	3.6	5.6
	CV									7.02	5.82	4.82	8.68
	Replicate F									4.200	0.875	3.050	4.412
	Replicate Prob(F)									0.0373	0.4386	0.0795	0.0327
	Treatment F									233.400	248.967	228.910	89.536
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

NUP-12004 Preplant Burndown in Corn.

Trial ID: 12-YRC-FP-NuFarm
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	VERAR	VERAR	VERAR	VERAR	OXAST	OXAST
	Pest Code									VERAR	VERAR	VERAR	VERAR	OXAST	OXAST
	Crop Code														
	Rating Date									4-21-12	4-25-12	5-2-12	5-16-12	5-2-12	5-16-12
	Rating Type									Control	Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
	Rating Timing														
	Trt-Eval Interval									3 DA-A	7 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A
1	NONTREATED									0 d	0 e	0 e	0 b	0 d	0 c
2	NUP-12004	3.52	EC	0.33	lb ae/a	12	fl oz/a	7DBP	A	18 a	22 ab	80 c	99 a	32 c	23 b
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A						
3	NUP-12004	3.52	EC	0.495	lb ae/a	18	fl oz/a	7DBP	A	20 a	20 b	83 b	99 a	38 b	28 b
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A						
4	WEEDONE LV 4 EC	3.84	EC	0.48	lb ae/a	16	fl oz/a	7DBP	A	12 b	20 b	72 d	99 a	27 c	27 b
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A						
5	CREDIT XTREME	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A	5 c	10 d	98 a	99 a	99 a	99 a
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	A						
6	NUP-12004	3.52	EC	0.33	lb ae/a	12	fl oz/a	7DBP	A	20 a	22 ab	99 a	99 a	99 a	99 a
	CREDIT XTREME	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	A						
7	NUP-12004	3.52	EC	0.495	lb ae/a	18	fl oz/a	7DBP	A	20 a	23 a	99 a	99 a	99 a	99 a
	CREDIT XTREME	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	A						
8	WEEDONE LV 4 EC	3.84	EC	0.48	lb ae/a	16	fl oz/a	7DBP	A	12 b	17 c	99 a	99 a	99 a	99 a
	CREDIT XTREME	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	7DBP	A						
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	7DBP	A						
	LSD (P=.05)									3.2	2.9	2.5	0.0	6.6	8.9
	Standard Deviation									1.9	1.7	1.4	0.0	3.8	5.1
	CV									13.88	10.09	1.84	0.0	6.11	8.56
	Replicate F									0.304	4.789	1.567	0.000	0.074	3.682
	Replicate Prob(F)									0.7424	0.0260	0.2432	1.0000	0.9293	0.0519
	Treatment F									51.478	66.526	1608.881	0.000	365.223	218.719
	Treatment Prob(F)									0.0001	0.0001	0.0001	1.0000	0.0001	0.0001

Southern Illinois University

NUP-12004 Preplant Burndown in Corn.

Trial ID: 12-YRC-FP-NuFarm
Location: Young Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Nufarm (H2012-103-IL).
2. Ratings: CI distinguish between burn and epinasty; rate at 14 and 28 DAT.
   WC at 3, 7, 14, and 28 DAT.
3. Take photos to demonstrate treatment differences.
4. Trial can be managed as needed after final rating.
5. ERICA-HR = Herbicide-resistant marestail (glyphosate).
   AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
6. On 5-2-12 at 14 DA-A the corn was just starting to emerge, and so crop injury rating
   was delayed until 16 DA-A.
   There was no visible crop injury of any type at any time.
7. Not harvested.

Southern Illinois University

Marestail Control with Fall and Spring Herbicide Applications.

Trial ID: 12-YRC-BASF-fall
Location: Young Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 11-23-11

Trial Location

City: Murphysboro
State/Prov.: IL
Postal Code: 62966
Country: USA

Objectives:
Evaluate tank-mix and timing options for improved marestail control
with Kixor applied preplant to preemergence.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR
BBCH Scale: BSOY **Planting Date:** 5-1-12
Planting Method: SEEDED Seeded **Rate, Unit:** 155000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** ERICA - Conyza canadensis (L.) Crong.
Common Name: horseweed
Description: glyphosate-resistant marestail

Pest 2 Type: W **Code:** LAMAM - Lamium amplexicaule L.
Common Name: henbit

Pest 3 Type: W **Code:** STEME - Stellaria media (L.) Vill.
Common Name: chickweed, common

Pest 4 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 27 LB/A, P2O5 69 LB/A, K2O 90 LB/A

Soil Description

% OM: 1.82 **Texture:** SIL SILT LOAM
pH: 6.2 **Soil Name:** ALVIN
CEC: 6.16

Additional Measured Elements

Element	Quantity	Unit
P1	154	LB/A
K	264	LB/A

Marestail Control with Fall and Spring Herbicide Applications.

Trial ID: 12-YRC-BASF-fall
Location: Young Res. Center
Investigator: Bryan Young

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

Application Description

	A	B	C	D
Application Date:	11-23-11	3-29-12	4-28-12	6-8-12
Time of Day:	14:30	10:45	8:45	16:30
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	FALL	PRE-BLT	1-3DBP	POST
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	JRK	LAH	LAH	JRK
Air Temperature, Unit:	52 F	69 F	75 F	86 F
% Relative Humidity:	74	63	72	31
Wind Velocity, Unit:	2 MPH	3 MPH	2 MPH	1 MPH
Wind Direction:	E	N	S	W
Dew Presence (Y/N):	N no	N no	Y yes	N no
Soil Temperature, Unit:	51 F	63 F	59 F	85 F
Soil Moisture:	ABONOR	NORMAL	NORMAL	BELNOR
% Cloud Cover:	100	40	20	5
Next Rain Occurred On:	11-26-11	4-3-12	4-30-12	6-11-12

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC	DESC	DESC
Stage Majority, Percent:	NA	NA	NA	V4
Stage Minimum, Percent:				V3
Stage Maximum, Percent:				V4
Height, Unit:				10 IN
Height Minimum, Maximum:				7 10

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	ERICA W DESC	ERICA W DESC	ERICA W DESC	ERICA W DESC
Stage Majority, Percent:	10	15	35	50+
Stage Minimum, Percent:	5	5	6	40
Stage Maximum, Percent:	15	25	50+	50+
Height, Unit:	0.5 IN	1 IN	6 IN	20 IN
Height Minimum, Maximum:	0.5 1.5	0.5 3	1 12	9 35
Density, Unit:	1 FT2	1 FT2	2 FT2	1 FT2
Pest 2 Code, Type, Scale:	LAMAM W DESC	LAMAM W DESC	LAMAM W DESC	LAMAM W DESC
Stage Majority, Percent:	8	7	NA	NA
Stage Minimum, Percent:	2	4		
Stage Maximum, Percent:	10	10		
Height, Unit:	2 IN	5 IN		
Height Minimum, Maximum:	0.5 4	4 6		
Density, Unit:	1 FT2	0.1 FT2		
Pest 3 Code, Type, Scale:	STEME W DESC	STEME W DESC	STEME W DESC	STEME W DESC
Stage Majority, Percent:	15	50+	50+	NA
Stage Minimum, Percent:	4			
Stage Maximum, Percent:	20			
Height, Unit:	0.5 IN	9 IN	6 IN	
Height Minimum, Maximum:	0.5 1	8 10	4 8	
Density, Unit:	0.8 FT2	0.01 FT2	0.5 FT2	
Pest 4 Code, Type, Scale:	AMATA W DESC	AMATA W DESC	AMATA W DESC	AMATA W DESC
Stage Majority, Percent:	NA	NA	NA	20
Stage Minimum, Percent:				2
Stage Maximum, Percent:				10
Height, Unit:				20 IN
Height Minimum, Maximum:				2 30
Density, Unit:				2 FT2

Southern Illinois University

Marestail Control with Fall and Spring Herbicide Applications.

Trial ID: 12-YRC-BASF-fall
Location: Young Res. Center

Investigator: Bryan Young

Application Equipment

	A	B	C	D
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR	XR
Nozzle Size:	8002	8002	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA

Marestail Control with Fall and Spring Herbicide Applications.

Trial ID: 12-YRC-BASF-fall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-12-12 Injury Percent 14 DA-C	GLXMA 6-9-12 Injury Percent 72 DA-B 42 DA-C	GLXMA 7-7-12 Injury Percent 70 DA-C
1	NONTREATED									0 a	0 a	0 a
2	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			
3	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE-BLT	B	0 a	0 a	0 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	PRE-BLT	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE-BLT	B			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE-BLT	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE-BLT	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			
4	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-3DBP	C	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-3DBP	C			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-3DBP	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-3DBP	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			
5	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE-BLT	B			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	PRE-BLT	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE-BLT	B			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE-BLT	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE-BLT	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			
6	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A	0 a	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-3DBP	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-3DBP	C			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-3DBP	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-3DBP	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			
7	ZIDUA	85	WG	0.16	lb ai/a	3	oz/a	FALL	A	0 a	0 a	0 a
	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Marestail Control with Fall and Spring Herbicide Applications.

Trial ID: 12-YRC-BASF-fall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
	Pest Code											
	Crop Code									GLXMA	GLXMA	GLXMA
	Rating Date									5-12-12	6-9-12	7-7-12
	Rating Type									Injury	Injury	Injury
	Rating Unit									Percent	Percent	Percent
	Rating Timing										72 DA-B	
	Trt-Eval Interval									14 DA-C	42 DA-C	70 DA-C
8	ZIDUA	85	WG	0.16	lb ai/a	3	oz/a	FALL	A	0 a	0 a	0 a
	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE-BLT	B			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	PRE-BLT	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE-BLT	B			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE-BLT	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE-BLT	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			
	LSD (P=.05)									0.0	0.0	0.0
	Standard Deviation									0.0	0.0	0.0
	CV									0.0	0.0	0.0
	Replicate F									0.000	0.000	0.000
	Replicate Prob(F)									1.0000	1.0000	1.0000
	Treatment F									0.000	0.000	0.000
	Treatment Prob(F)									1.0000	1.0000	1.0000

Marestail Control with Fall and Spring Herbicide Applications.

Trial ID: 12-YRC-BASF-fall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR 11-30-11 Control Percent 7 DA-A	ERICA-HR 12-14-11 Control Percent 21 DA-A	ERICA-HR 1-18-12 Control Percent 56 DA-A	ERICA-HR 2-15-12 Control Percent 84 DA-A	ERICA-HR 4-5-12 Control Percent 7 DA-B	ERICA-HR 4-12-12 Control Percent 14 DA-B
1	NONTREATED									0 b	0 c	0 c	0 b	0 d	0 d
2	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A	8 a	33 a	89 a	77 a	65 b	62 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D						
3	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE-BLT	B					99 a	99 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	PRE-BLT	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE-BLT	B						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE-BLT	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE-BLT	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D						
4	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-3DBP	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-3DBP	C						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-3DBP	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-3DBP	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D						
5	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A	10 a	28 ab	81 b	68 a	99 a	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE-BLT	B						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	PRE-BLT	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE-BLT	B						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE-BLT	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE-BLT	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D						
6	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A	10 a	32 ab	73 b	65 a	53 c	48 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-3DBP	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-3DBP	C						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-3DBP	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-3DBP	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D						
7	ZIDUA	85	WG	0.16	lb ai/a	3	oz/a	FALL	A	10 a	32 ab	75 b	68 a	58 bc	50 c
	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D						

Marestail Control with Fall and Spring Herbicide Applications.

Trial ID: 12-YRC-BASF-fall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
Pest Code										ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR
Crop Code															
Rating Date										11-30-11	12-14-11	1-18-12	2-15-12	4-5-12	4-12-12
Rating Type										Control	Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing															
Trt-Eval Interval										7 DA-A	21 DA-A	56 DA-A	84 DA-A	7 DA-B	14 DA-B
8	ZIDUA	85	WG	0.16	lb ai/a	3	oz/a	FALL	A	8 a	27 b	75 b	70 a	99 a	99 a
	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE-BLT	B						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	PRE-BLT	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE-BLT	B						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE-BLT	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE-BLT	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D						
LSD (P=.05)										2.7	6.1	7.7	12.3	10.1	8.5
Standard Deviation										1.5	3.4	4.2	6.7	5.7	4.8
CV										19.17	13.35	6.43	11.63	8.4	7.33
Replicate F										2.500	5.244	0.022	0.488	2.245	3.541
Replicate Prob(F)										0.1317	0.0277	0.9784	0.6279	0.1485	0.0619
Treatment F										20.500	41.976	179.593	54.250	120.957	178.600
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Marestail Control with Fall and Spring Herbicide Applications.

Trial ID: 12-YRC-BASF-fall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR 5-3-12 Control Percent 5 DA-C	ERICA-HR 5-12-12 Control Percent 14 DA-C	ERICA-HR 6-9-12 Control Percent 72 DA-B 42 DA-C	ERICA-HR 7-7-12 Control Percent 70 DA-C
1	NONTREATED									0 d	0 c	0 c	32 a
2	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A	45 b	38 b	32 b	45 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				
3	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE-BLT	B	97 a	96 a	95 a	96 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	PRE-BLT	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE-BLT	B				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE-BLT	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE-BLT	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				
4	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-3DBP	C	97 a	97 a	94 a	89 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-3DBP	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-3DBP	C				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-3DBP	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				
5	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A	97 a	97 a	97 a	97 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE-BLT	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	PRE-BLT	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE-BLT	B				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE-BLT	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE-BLT	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				
6	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A	98 a	98 a	98 a	96 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-3DBP	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-3DBP	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-3DBP	C				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-3DBP	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				
7	ZIDUA	85	WG	0.16	lb ai/a	3	oz/a	FALL	A	40 c	35 b	28 b	38 a
	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				

Marestail Control with Fall and Spring Herbicide Applications.

Trial ID: 12-YRC-BASF-fall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR
	Pest Code									ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR
	Crop Code												
	Rating Date									5-3-12	5-12-12	6-9-12	7-7-12
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing											72 DA-B	
	Trt-Eval Interval									5 DA-C	14 DA-C	42 DA-C	70 DA-C
8	ZIDUA	85	WG	0.16	lb ai/a	3	oz/a	FALL	A	99 a	99 a	98 a	65 a
	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE-BLT	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	PRE-BLT	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE-BLT	B				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE-BLT	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE-BLT	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				
	LSD (P=.05)									3.7	6.8	11.0	54.9
	Standard Deviation									2.1	3.9	6.3	31.3
	CV									2.95	5.57	9.27	44.91
	Replicate F									6.326	2.114	1.640	0.189
	Replicate Prob(F)									0.0110	0.1576	0.2291	0.8297
	Treatment F									981.727	307.197	125.477	2.443
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0734

Marestail Control with Fall and Spring Herbicide Applications.

Trial ID: 12-YRC-BASF-fall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	LAMAM 11-30-11 Control Percent 7 DA-A	LAMAM 12-14-11 Control Percent 21 DA-A	LAMAM 1-18-12 Control Percent 56 DA-A	LAMAM 2-15-12 Control Percent 84 DA-A	LAMAM 4-5-12 Control Percent 7 DA-B	LAMAM 4-12-12 Control Percent 14 DA-B
1	NONTREATED									0 b	0 b	0 c	0 c	0 c	0 d
2	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A	10 a	42 a	95 a	94 a	91 ab	87 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D						
3	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE-BLT	B					90 ab	93 abc
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	PRE-BLT	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE-BLT	B						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE-BLT	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE-BLT	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D						
4	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-3DBP	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-3DBP	C						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-3DBP	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-3DBP	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D						
5	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A	8 a	38 a	93 ab	88 b	93 ab	96 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE-BLT	B						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	PRE-BLT	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE-BLT	B						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE-BLT	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE-BLT	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D						
6	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A	10 a	42 a	90 b	90 b	88 ab	87 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-3DBP	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-3DBP	C						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-3DBP	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-3DBP	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D						
7	ZIDUA	85	WG	0.16	lb ai/a	3	oz/a	FALL	A	8 a	40 a	90 b	90 b	87 b	87 c
	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D						

Marestail Control with Fall and Spring Herbicide Applications.

Trial ID: 12-YRC-BASF-fall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
Pest Code										LAMAM	LAMAM	LAMAM	LAMAM	LAMAM	LAMAM
Crop Code															
Rating Date										11-30-11	12-14-11	1-18-12	2-15-12	4-5-12	4-12-12
Rating Type										Control	Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing															
Trt-Eval Interval										7 DA-A	21 DA-A	56 DA-A	84 DA-A	7 DA-B	14 DA-B
8	ZIDUA	85	WG	0.16	lb ai/a	3	oz/a	FALL	A	8 a	40 a	90 b	90 b	95 a	97 a
	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE-BLT	B						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	PRE-BLT	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE-BLT	B						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE-BLT	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE-BLT	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D						
LSD (P=.05)										3.7	4.0	4.0	3.1	7.2	8.4
Standard Deviation										2.0	2.2	2.2	1.7	4.0	4.7
CV										27.22	6.47	2.89	2.25	5.18	6.05
Replicate F										1.000	0.294	0.591	2.385	2.404	3.070
Replicate Prob(F)										0.4019	0.7514	0.5721	0.1423	0.1324	0.0838
Treatment F										10.200	173.235	862.102	1420.173	218.647	161.794
Treatment Prob(F)										0.0011	0.0001	0.0001	0.0001	0.0001	0.0001

Marestail Control with Fall and Spring Herbicide Applications.

Trial ID: 12-YRC-BASF-fall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	STEME 11-30-11 Control Percent 7 DA-A	STEME 12-14-11 Control Percent 21 DA-A	STEME 1-18-12 Control Percent 56 DA-A	STEME 2-15-12 Control Percent 84 DA-A	STEME 4-5-12 Control Percent 7 DA-B	STEME 4-12-12 Control Percent 14 DA-B
1	NONTREATED									0 c	0 b	0 b	0 b	0 c	0 c
2	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A	7 b	37 a	95 a	96 a	87 ab	85 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D						
3	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE-BLT	B					93 ab	98 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	PRE-BLT	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE-BLT	B						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE-BLT	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE-BLT	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D						
4	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-3DBP	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-3DBP	C						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-3DBP	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-3DBP	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D						
5	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A	10 a	40 a	96 a	93 a	97 a	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE-BLT	B						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	PRE-BLT	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE-BLT	B						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE-BLT	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE-BLT	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D						
6	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A	10 a	42 a	95 a	93 a	83 ab	83 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-3DBP	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-3DBP	C						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-3DBP	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-3DBP	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D						
7	ZIDUA	85	WG	0.16	lb ai/a	3	oz/a	FALL	A	7 b	45 a	93 a	93 a	70 b	87 b
	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D						

Marestail Control with Fall and Spring Herbicide Applications.

Trial ID: 12-YRC-BASF-fall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code						
	Pest Code									STEME	STEME	STEME	STEME	STEME	STEME
	Crop Code														
	Rating Date									11-30-11	12-14-11	1-18-12	2-15-12	4-5-12	4-12-12
	Rating Type									Control	Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
	Rating Timing														
	Trt-Eval Interval									7 DA-A	21 DA-A	56 DA-A	84 DA-A	7 DA-B	14 DA-B
8	ZIDUA	85	WG	0.16	lb ai/a	3	oz/a	FALL	A	5 b	43 a	93 a	93 a	98 a	99 a
	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE-BLT	B						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	PRE-BLT	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE-BLT	B						
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE-BLT	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE-BLT	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D						
	LSD (P=.05)									3.2	12.4	4.5	4.8	24.3	7.2
	Standard Deviation									1.7	6.8	2.5	2.6	13.7	4.0
	CV									27.36	19.77	3.17	3.34	18.08	5.13
	Replicate F									0.455	0.389	0.508	0.073	0.999	2.772
	Replicate Prob(F)									0.6472	0.6874	0.6164	0.9299	0.3969	0.1024
	Treatment F									13.545	18.946	715.230	644.171	19.352	230.107
	Treatment Prob(F)									0.0003	0.0001	0.0001	0.0001	0.0001	0.0001

Marestail Control with Fall and Spring Herbicide Applications.

Trial ID: 12-YRC-BASF-fall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 4-5-12 Control Percent 7 DA-B	AMATA-HR 4-12-12 Control Percent 14 DA-B	AMATA-HR 5-3-12 Control Percent 5 DA-C	AMATA-HR 5-12-12 Control Percent 14 DA-C	AMATA-HR 6-9-12 Control Percent 72 DA-B 42 DA-C
1	NONTREATED									0 b	0 b	0 e	0 e	0 d
2	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A	0 b	0 b	17 d	23 d	33 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					
3	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE-BLT	B	99 a	99 a	67 c	33 cd	0 d
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	PRE-BLT	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE-BLT	B					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE-BLT	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE-BLT	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					
4	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-3DBP	C			99 a	99 a	89 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-3DBP	C					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-3DBP	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-3DBP	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					
5	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A	99 a	99 a	78 b	62 b	15 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE-BLT	B					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	PRE-BLT	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE-BLT	B					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE-BLT	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE-BLT	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					
6	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A	0 b	0 b	98 a	95 a	83 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-3DBP	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-3DBP	C					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-3DBP	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-3DBP	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					
7	ZIDUA	85	WG	0.16	lb ai/a	3	oz/a	FALL	A	10 b	3 b	15 d	22 d	40 b
	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					

Marestail Control with Fall and Spring Herbicide Applications.

Trial ID: 12-YRC-BASF-fall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
Pest Code										AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
Crop Code														
Rating Date										4-5-12	4-12-12	5-3-12	5-12-12	6-9-12
Rating Type										Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent
Rating Timing														72 DA-B
Trt-Eval Interval										7 DA-B	14 DA-B	5 DA-C	14 DA-C	42 DA-C
8	ZIDUA	85	WG	0.16	lb ai/a	3	oz/a	FALL	A	99 a	99 a	68 bc	43 c	17 c
	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE-BLT	B					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	PRE-BLT	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE-BLT	B					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE-BLT	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE-BLT	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					
LSD (P=.05)										11.6	3.9	10.6	16.8	14.2
Standard Deviation										6.5	2.2	6.1	9.6	8.1
CV										14.93	5.09	10.95	20.34	23.43
Replicate F										1.000	1.000	0.689	2.112	1.014
Replicate Prob(F)										0.3966	0.3966	0.5184	0.1579	0.3880
Treatment F										187.120	1735.480	125.500	41.068	54.851
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001

Marestail Control with Fall and Spring Herbicide Applications.

Trial ID: 12-YRC-BASF-fall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 7-7-12 Control Percent 70 DA-C
	Pest Code									
	Crop Code									
	Rating Date									
	Rating Type									
	Rating Unit									
	Rating Timing									
	Trt-Eval Interval									
1	NONTREATED									10 a
2	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A	92 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A	
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D	
3	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE-BLT	B	27 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	PRE-BLT	B	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE-BLT	B	
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE-BLT	B	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE-BLT	B	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D	
4	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-3DBP	C	63 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-3DBP	C	
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-3DBP	C	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-3DBP	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D	
5	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A	42 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A	
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A	
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE-BLT	B	
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	PRE-BLT	B	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE-BLT	B	
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE-BLT	B	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE-BLT	B	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D	
6	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A	62 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	FALL	A	
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A	
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-3DBP	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	1-3DBP	C	
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-3DBP	C	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-3DBP	C	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D	
7	ZIDUA	85	WG	0.16	lb ai/a	3	oz/a	FALL	A	92 a
	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D	

Marestail Control with Fall and Spring Herbicide Applications.

Trial ID: 12-YRC-BASF-fall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	
	Pest Code									AMATA-HR
	Crop Code									
	Rating Date									7-7-12
	Rating Type									Control
	Rating Unit									Percent
	Rating Timing									
	Trt-Eval Interval									70 DA-C
8	ZIDUA	85	WG	0.16	lb ai/a	3	oz/a	FALL	A	37 a
	DISTINCT	70	WG	0.0875	lb ae/a	2	oz/a	FALL	A	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A	
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	PRE-BLT	B	
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	16	fl oz/a	PRE-BLT	B	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	PRE-BLT	B	
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	PRE-BLT	B	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	PRE-BLT	B	
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D	
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	POST	D	
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D	
	LSD (P=.05)									61.4
	Standard Deviation									35.1
	CV									66.17
	Replicate F									0.202
	Replicate Prob(F)									0.8198
	Treatment F									2.133
	Treatment Prob(F)									0.1078

Southern Illinois University

Marestail Control with Fall and Spring Herbicide Applications.

Trial ID: 12-YRC-BASF-fall
Location: Young Res. Center

Investigator: Bryan Young

Trial Comments

1. Protocol: BASF.
2. Ratings: CI 2-3 WA-C, 6-8 WA-C, 10-12 WA-C.
   Burndown WC 5-7 DAT, WC 2-3 WAT, 6-8 WAT, 10-12 WAT.
3. PRE-BLT (B) timing should be made to rosette marestail.
   1-3DBP (C) timing should be applied when bolted marestail are 4-6 inch in height.
   POST (D) timing should be applied 6-8 WA-C.
4. ERICA-HR = Herbicide-resistant marestail (glyphosate).
   AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
5. By 5-3-12, STEME and LAMAM in the nontreated plots were senescing naturally
   and could no longer be evaluated.
6. Not harvested.

Southern Illinois University

General Evaluation of Fall- and Spring-Applied Residual Herbicides in Soybean.

Trial ID: 12-YRC-GenFall
Location: Young Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 11-23-11

Trial Location

City: Murphysboro
State/Prov.: IL
Postal Code: 62966
Country: USA

Objectives:
Evaluate the benefit of residuale herbicides applied in the fall
and spring for control of winter annual weeds and waterhemp.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 5-1-12
Planting Method: SEEDED Seeded **Rate, Unit:** 155000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** ERICA - Conyza canadensis (L.) Crong.
Common Name: horseweed
Description: glyphosate-resistant marestail

Pest 2 Type: W **Code:** LAMAM - Lamium amplexicaule L.
Common Name: henbit

Pest 3 Type: W **Code:** STEME - Stellaria media (L.) Vill.
Common Name: chickweed, common

Pest 4 Type: W **Code:** VERAR - Veronica arvensis L.
Common Name: speedwell, corn

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 27 LB/A, P2O5 69 LB/A, K2O 90 LB/A

Soil Description

% OM: 1.82 **Texture:** SIL SILT LOAM
pH: 6.2 **Soil Name:** ALVIN
CEC: 6.16

Additional Measured Elements

Element	Quantity	Unit
P1	154	LB/A
K	264	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

General Evaluation of Fall- and Spring-Applied Residual Herbicides in Soybean.

Trial ID: 12-YRC-GenFall
Location: Young Res. Center
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-10-12					7	DAY	30.1	79.2	F
2.	4-13-12	0.22	IN	RAIN	rain					
3.	4-15-12	0.47	IN	RAIN	rain					
4.	4-16-12	0.29	IN	RAIN	rain					
5.	4-17-12					7	DAY	36.7	75.6	F
6.	4-20-12	0.13	IN	RAIN	rain					
7.	4-22-12	0.13	IN	RAIN	rain					
8.	4-24-12					7	DAY	43.7	80.9	F
9.	4-27-12	0.04	IN	RAIN	rain					
10.	4-30-12	0.55	IN	RAIN	rain					
11.	5-1-12					7	DAY	59.1	91.3	F
12.	5-6-12	0.14	IN	RAIN	rain					
13.	5-7-12	0.07	IN	RAIN	rain					
14.	5-8-12					7	DAY	43.3	79	F
15.	5-15-12					7	DAY	44.9	89.1	F
16.	5-20-12	0.93	IN	RAIN	rain					
17.	5-22-12					7	DAY	45.5	92.8	F
18.	5-29-12					7	DAY	46.3	89.8	F
19.	5-30-12	0.02	IN	RAIN	rain					
20.	5-31-12	0.14	IN	RAIN	rain					
21.	6-4-12	0.49	IN	RAIN	rain					
22.	6-5-12					7	DAY	48.5	88.8	F
23.	6-11-12	0.21	IN	RAIN	rain					
24.	6-12-12					7	DAY	49.8	91.1	F
25.	6-17-12	0.03	IN	RAIN	rain					
26.	6-19-12					7	DAY	55.4	96.4	F
27.	6-26-12					7	DAY	51.1	105.4	F
28.	7-3-12					7	DAY	71.1	105	F
29.	7-8-12	0.07	IN	RAIN	rain					
30.	7-9-12	0.12	IN	RAIN	rain					
31.	7-10-12					7	DAY	65.9	93.9	F
32.	7-14-12	0.02	IN	RAIN	rain					
33.	7-17-12					7	DAY	60	102.3	F
34.	7-17-12	0.03	IN	RAIN	rain					
35.	7-24-12					7	DAY	64.1	102.1	F
36.	7-26-12	1.41	IN	RAIN	rain					
37.	7-29-12	0.24	IN	RAIN	rain					
38.	7-31-12					7	DAY	62.7	97.9	F
39.	8-2-12	0.08	IN	RAIN	rain					
40.	8-4-12	3.29	IN	RAIN	rain					
41.	8-5-12	0.21	IN	RAIN	rain					
42.	8-7-12					7	DAY	54.1	97.2	F

Southern Illinois University

General Evaluation of Fall- and Spring-Applied Residual Herbicides in Soybean.

Trial ID: 12-YRC-GenFall
Location: Young Res. Center
Investigator: Bryan Young

Application Description

	A	B	C	D
Application Date:	11-23-11	4-24-12	5-25-12	5-31-12
Time of Day:	14:30	8:30	6:30	9:00
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	FALL	7DBP	V1-V2	V2-V4
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	LAH	JRK	JRK	LAH
Air Temperature, Unit:	52 F	59 F	77 F	79 F
% Relative Humidity:	74	53	78	61
Wind Velocity, Unit:	2 MPH	2 MPH	4 MPH	2 MPH
Wind Direction:	E	SW	S	N
Dew Presence (Y/N):	N no	Y yes	N no	N no
Soil Temperature, Unit:	51 F	52 F	73 F	70 F
Soil Moisture:	ABONOR	NORMAL	BELNOR	NORMAL
% Cloud Cover:	100	95	75	50
Next Rain Occurred On:	11-26-12	4-27-12	5-31-12	6-4-12

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC	DESC	DESC
Stage Majority, Percent:	NA	NA	V2	V4
Stage Minimum, Percent:			V1	V2
Stage Maximum, Percent:			V2	V4
Height, Unit:			6 IN	8 IN
Height Minimum, Maximum:			4 6	4 8

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	ERICA W DESC	ERICA W DESC	ERICA W DESC	ERICA W DESC
Stage Majority, Percent:	10	25	12	20
Stage Minimum, Percent:	5	6	10	10
Stage Maximum, Percent:	15	40	50+	50+
Height, Unit:	0.5 IN	4 IN	4 IN	8 IN
Height Minimum, Maximum:	0.5 1.5	0.5 8	3 18	4 22
Density, Unit:	1 FT2	0.5 FT2	0.3 FT2	0.1 FT2
Pest 2 Code, Type, Scale:	LAMAM W DESC	LAMAM W DESC	LAMAM W DESC	LAMAM W DESC
Stage Majority, Percent:	8	NA	NA	NA
Stage Minimum, Percent:	2			
Stage Maximum, Percent:	10			
Height, Unit:	2 IN			
Height Minimum, Maximum:	0.5 4			
Density, Unit:	1 FT2			
Pest 3 Code, Type, Scale:	STEME W DESC	STEME W DESC	STEME W DESC	STEME W DESC
Stage Majority, Percent:	15	NA	NA	NA
Stage Minimum, Percent:	4			
Stage Maximum, Percent:	20			
Height, Unit:	0.5 IN			
Height Minimum, Maximum:	0.5 1			
Density, Unit:	0.8 FT2			
Pest 4 Code, Type, Scale:	VERAR W DESC	VERAR W DESC	VERAR W DESC	VERAR W DESC
Stage Majority, Percent:	NA	50+	NA	NA
Stage Minimum, Percent:		30		
Stage Maximum, Percent:		50+		
Height, Unit:		9 IN		
Height Minimum, Maximum:		8 10		
Density, Unit:		20 FT2		

Southern Illinois University

General Evaluation of Fall- and Spring-Applied Residual Herbicides in Soybean.

Trial ID: 12-YRC-GenFall
Location: Young Res. Center

Investigator: Bryan Young

Application Equipment

	A	B	C	D
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR	XR
Nozzle Size:	8002	8002	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA

General Evaluation of Fall- and Spring-Applied Residual Herbicides in Soybean.

Trial ID: 12-YRC-GenFall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-16-12 Yield bu/A	GLXMA 5-15-12 Injury Percent 14 DAP 21 DA-B	GLXMA 5-31-12 Injury Percent 6 DA-C 0 DA-D	GLXMA 6-28-12 Injury Percent 34 DA-C 28 DA-D
1	NONTREATED									2 ef	0 a	1 b	0 a
2	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	FALL	A	3 ef	0 a	0 c	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
3	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	FALL	A	1 f	0 a	0 c	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
4	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	FALL	A	3 ef	0 a	0 c	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
5	VALOR SX	51	WG	0.056	lb ai/a	1.76	oz/a	FALL	A	8 ef	0 a	0 c	0 a
	CLASSIC	25	WG	0.0194	lb ai/a	1.25	oz/a	FALL	A				
	V-10206	85	WG	0.053	lb ai/a	1	oz/a	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
6	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	FALL	A	17 d	0 a	0 c	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	7DBP	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B				
7	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	FALL	A	2 ef	0 a	0 c	0 a
	V50112	50	WG	0.089	lb ai/a	2.85	oz/a	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
8	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	FALL	A	2 ef	0 a	0 c	0 a
	V50112	50	WG	0.089	lb ai/a	2.85	oz/a	FALL	A				
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	A				
9	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A	8 ef	0 a	0 c	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D				
10	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A	27 c	0 a	0 c	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D				

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

General Evaluation of Fall- and Spring-Applied Residual Herbicides in Soybean.

Trial ID: 12-YRC-GenFall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-16-12 Yield bu/A	GLXMA 5-15-12 Injury Percent 14 DAP 21 DA-B	GLXMA 5-31-12 Injury Percent 6 DA-C 0 DA-D	GLXMA 6-28-12 Injury Percent 34 DA-C 28 DA-D
11	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A	10 de	0 a	7 a	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
	ANTHEM	2.15	SE	0.101	lb ai/a	6	oz/a	V1-V2	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	C				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V1-V2	C				
12	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	32 c	0 a	0 c	0 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D				
13	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	35 bc	0 a	0 c	0 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D				
14	CANOPY EX	29.5	WG	0.037	lb ai/a	2	oz/a	FALL	A	44 a	0 a	0 c	0 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	7DBP	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D				
15	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	41 ab	0 a	0 c	0 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	7DBP	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D				
16	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	44 a	0 a	0 c	0 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	7DBP	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D				
LSD (P=.05)										8.3	0.0	1.2	0.0
Standard Deviation										5.8	0.0	0.9	0.0
CV										33.35	0.0	174.8	0.0
Replicate F										0.361	0.000	0.491	0.000
Replicate Prob(F)										0.7814	1.0000	0.6904	1.0000
Treatment F										33.259	0.000	15.055	0.000
Treatment Prob(F)										0.0001	1.0000	0.0001	1.0000

General Evaluation of Fall- and Spring-Applied Residual Herbicides in Soybean.

Trial ID: 12-YRC-GenFall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR 12-14-11 Control Percent 21 DA-A	ERICA-HR 4-1-12 Control Percent 130 DA-A	ERICA-HR 4-23-12 Control Percent -1 DA-B	ERICA-HR 5-1-12 Control Percent 0 DAP 7 DA-B	ERICA-HR 5-15-12 Control Percent 14 DAP 21 DA-B	ERICA-HR 5-31-12 Control Percent 6 DA-C 0 DA-D
1	NONTREATED									0 g	0 f	0 e	0 g	0 g	0 f
2	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	FALL	A	49 d	86 c	64 b	60 e	53 e	49 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
3	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	FALL	A	54 bc	86 bc	68 b	65 e	59 e	54 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
4	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	FALL	A	51 bcd	98 a	91 a	89 abc	79 cd	71 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
5	VALOR SX	51	WG	0.056	lb ai/a	1.76	oz/a	FALL	A	49 d	98 a	95 a	93 ab	85 bc	77 c
	CLASSIC	25	WG	0.0194	lb ai/a	1.25	oz/a	FALL	A						
	V-10206	85	WG	0.053	lb ai/a	1	oz/a	FALL	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
6	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	FALL	A	51 bcd	97 ab	94 a	97 a	98 a	97 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	7DBP	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B						
7	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	FALL	A	59 a	89 abc	73 b	69 e	58 e	53 d
	V50112	50	WG	0.089	lb ai/a	2.85	oz/a	FALL	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
8	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	FALL	A	55 ab	38 e	24 d	21 f	20 f	18 e
	V50112	50	WG	0.089	lb ai/a	2.85	oz/a	FALL	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	A						
9	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A	53 bcd	96 abc	90 a	88 abc	78 cd	73 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D						
10	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A	51 bcd	98 a	91 a	94 ab	95 a	95 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D						

General Evaluation of Fall- and Spring-Applied Residual Herbicides in Soybean.

Trial ID: 12-YRC-GenFall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR
	Pest Code									ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR
	Crop Code														
	Rating Date									12-14-11	4-1-12	4-23-12	5-1-12	5-15-12	5-31-12
	Rating Type									Control	Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
	Rating Timing												0 DAP	14 DAP	6 DA-C
	Trt-Eval Interval									21 DA-A	130 DA-A	-1 DA-B	7 DA-B	21 DA-B	0 DA-D
11	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A	50 cd	97 ab	88 a	87 bcd	74 d	76 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	ANTHEM	2.15	SE	0.101	lb ai/a	6	oz/a	V1-V2	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V1-V2	C						
12	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	30 e	37 e	40 c	78 d	90 ab	86 b
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D						
13	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	25 f	58 d	41 c	83 cd	95 a	94 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D						
14	CANOPY EX	29.5	WG	0.037	lb ai/a	2	oz/a	FALL	A	28 ef	98 a	96 a	97 a	98 a	97 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	7DBP	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D						
15	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	24 f	53 d	41 c	84 cd	95 a	94 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	7DBP	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D						
16	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	28 ef	53 d	41 c	85 bcd	97 a	97 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	7DBP	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D						
	LSD (P=.05)									4.8	11.2	10.6	8.9	8.6	7.2
	Standard Deviation									3.4	7.8	7.4	6.3	6.0	5.0
	CV									8.22	10.61	11.45	8.44	8.21	7.16
	Replicate F									1.933	1.740	1.656	2.215	0.809	0.200
	Replicate Prob(F)									0.1379	0.1727	0.1899	0.0994	0.4953	0.8956
	Treatment F									95.227	59.893	65.357	76.259	94.400	135.743
	Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

General Evaluation of Fall- and Spring-Applied Residual Herbicides in Soybean.

Trial ID: 12-YRC-GenFall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR	LAMAM	LAMAM	LAMAM	STEME	STEME
	Pest Code									ERICA-HR	LAMAM	LAMAM	LAMAM	STEME	STEME
	Crop Code														
	Rating Date									6-28-12	12-14-11	4-1-12	4-23-12	12-14-11	4-1-12
	Rating Type									Control	Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent	Percent
	Rating Timing									34 DA-C					
	Trt-Eval Interval									28 DA-D	21 DA-A	130 DA-A	-1 DA-B	21 DA-A	130 DA-A
1	NONTREATED									0 g	0 g	0 d	0 d	0 f	0 e
2	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	FALL	A	35 f	81 abc	93 a	94 a	85 a	99 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
3	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	FALL	A	40 f	84 ab	97 a	95 a	91 a	96 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
4	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	FALL	A	69 e	79 bcd	98 a	98 a	88 a	96 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
5	VALOR SX	51	WG	0.056	lb ai/a	1.76	oz/a	FALL	A	70 e	80 a-d	99 a	99 a	89 a	99 a
	CLASSIC	25	WG	0.0194	lb ai/a	1.25	oz/a	FALL	A						
	V-10206	85	WG	0.053	lb ai/a	1	oz/a	FALL	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
6	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	FALL	A	94 a	79 bcd	96 a	97 a	85 a	97 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	7DBP	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B						
7	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	FALL	A	34 f	85 a	94 a	93 a	85 a	86 c
	V50112	50	WG	0.089	lb ai/a	2.85	oz/a	FALL	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
8	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	FALL	A	8 g	73 e	38 c	36 c	70 b	48 d
	V50112	50	WG	0.089	lb ai/a	2.85	oz/a	FALL	A						
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	A						
9	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A	73 de	76 cde	99 a	99 a	55 c	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D						
10	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A	94 a	75 de	98 a	96 a	64 b	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D						

General Evaluation of Fall- and Spring-Applied Residual Herbicides in Soybean.

Trial ID: 12-YRC-GenFall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR	LAMAM	LAMAM	LAMAM	STEME	STEME
Pest Code															
Crop Code															
Rating Date										6-28-12	12-14-11	4-1-12	4-23-12	12-14-11	4-1-12
Rating Type										Control	Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent	Percent
Rating Timing										34 DA-C					
Trt-Eval Interval										28 DA-D	21 DA-A	130 DA-A	-1 DA-B	21 DA-A	130 DA-A
11	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A	80 cd	75 de	98 a	97 a	54 c	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	ANTHEM	2.15	SE	0.101	lb ai/a	6	oz/a	V1-V2	C						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	C						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V1-V2	C						
12	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	85 bc	30 f	55 b	40 c	31 e	94 abc
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D						
13	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	93 ab	31 f	40 c	40 c	34 de	92 abc
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D						
14	CANOPY EX	29.5	WG	0.037	lb ai/a	2	oz/a	FALL	A	97 a	35 f	98 a	98 a	40 d	99 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	7DBP	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D						
15	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	95 a	34 f	55 b	53 b	31 e	91 bc
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	7DBP	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D						
16	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	96 a	31 f	48 bc	48 bc	34 de	95 ab
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A						
	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B						
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	7DBP	B						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B						
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D						
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D						
LSD (P=.05)										8.5	5.6	10.7	11.5	6.4	7.6
Standard Deviation										6.0	3.9	7.5	8.0	4.5	5.3
CV										9.01	6.56	9.95	10.86	7.67	6.16
Replicate F										0.461	4.310	1.050	1.252	10.329	1.404
Replicate Prob(F)										0.7112	0.0094	0.3796	0.3022	0.0001	0.2541
Treatment F										119.671	195.469	69.581	64.163	154.194	96.968
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

General Evaluation of Fall- and Spring-Applied Residual Herbicides in Soybean.

Trial ID: 12-YRC-GenFall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	VERAR 4-1-12 Control Percent 130 DA-A	VERAR 4-23-12 Control Percent -1 DA-B	VERAR 5-1-12 Control Percent 0 DAP 7 DA-B
1	NONTREATED									0 f	0 i	0 f
2	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	FALL	A	91 ab	83 bcd	79 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
3	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	FALL	A	93 a	84 bcd	79 bc
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
4	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	FALL	A	96 a	94 ab	93 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
5	VALOR SX	51	WG	0.056	lb ai/a	1.76	oz/a	FALL	A	96 a	96 a	95 a
	CLASSIC	25	WG	0.0194	lb ai/a	1.25	oz/a	FALL	A			
	V-10206	85	WG	0.053	lb ai/a	1	oz/a	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
6	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	FALL	A	91 ab	90 abc	98 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	7DBP	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	7DBP	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B			
7	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	FALL	A	92 a	87 abc	84 b
	V50112	50	WG	0.089	lb ai/a	2.85	oz/a	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
8	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	FALL	A	73 cd	59 fg	59 e
	V50112	50	WG	0.089	lb ai/a	2.85	oz/a	FALL	A			
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	A			
9	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A	81 bc	74 de	71 cd
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D			
10	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A	70 d	55 g	96 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	7DBP	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D			

General Evaluation of Fall- and Spring-Applied Residual Herbicides in Soybean.

Trial ID: 12-YRC-GenFall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	VERAR 4-1-12 Control Percent 130 DA-A	VERAR 4-23-12 Control Percent -1 DA-B	VERAR 5-1-12 Control Percent 0 DAP 7 DA-B
11	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A	75 cd	70 ef	68 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
	ANTHEM	2.15	SE	0.101	lb ai/a	6	oz/a	V1-V2	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V1-V2	C			
12	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	48 e	23 h	93 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	7DBP	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D			
13	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	41 e	13 h	93 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	7DBP	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D			
14	CANOPY EX	29.5	WG	0.037	lb ai/a	2	oz/a	FALL	A	88 ab	80 cde	96 a
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	7DBP	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	7DBP	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D			
15	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	41 e	13 h	96 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	7DBP	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	7DBP	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D			
16	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	48 e	20 h	96 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	7DBP	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	7DBP	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D			
LSD (P=.05)										10.7	11.7	8.5
Standard Deviation										7.5	8.2	5.9
CV										10.65	13.94	7.35
Replicate F										6.601	2.270	2.602
Replicate Prob(F)										0.0009	0.0932	0.0636
Treatment F										53.806	67.575	68.679
Treatment Prob(F)										0.0001	0.0001	0.0001

General Evaluation of Fall- and Spring-Applied Residual Herbicides in Soybean.

Trial ID: 12-YRC-GenFall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 4-23-12 Control Percent -1 DA-B	AMATA-HR 5-1-12 Control Percent 0 DAP 7 DA-B	AMATA-HR 5-15-12 Control Percent 14 DAP 21 DA-B	AMATA-HR 5-31-12 Control Percent 6 DA-C 0 DA-D	AMATA-HR 6-28-12 Control Percent 34 DA-C 28 DA-D
1	NONTREATED									0 g	0 e	0 f	0 g	0 e
2	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	FALL	A	56 bcd	44 d	19 de	16 f	13 e
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A					
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
3	FIERCE	76	WG	0.143	lb ai/a	3	oz/a	FALL	A	56 bcd	43 d	10 ef	5 g	5 e
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A					
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
4	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	FALL	A	82 a	73 bc	34 c	16 f	10 e
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A					
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
5	VALOR SX	51	WG	0.056	lb ai/a	1.76	oz/a	FALL	A	74 ab	66 bc	20 de	10 fg	8 e
	CLASSIC	25	WG	0.0194	lb ai/a	1.25	oz/a	FALL	A					
	V-10206	85	WG	0.053	lb ai/a	1	oz/a	FALL	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A					
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
6	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	FALL	A	68 abc	97 a	97 a	85 bc	58 c
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A					
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	7DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	7DBP	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B					
7	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	FALL	A	71 ab	60 c	30 cd	18 f	10 e
	V50112	50	WG	0.089	lb ai/a	2.85	oz/a	FALL	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A					
	2,4-D LV 4	3.8	EC	0.95	lb ae/a	1	qt/a	FALL	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
8	VALOR SX	51	WG	0.064	lb ai/a	2	oz/a	FALL	A	79 a	76 b	68 b	59 d	63 c
	V50112	50	WG	0.089	lb ai/a	2.85	oz/a	FALL	A					
	NIS (ACTIVATOR 90)	100	SL	0.25	% v/v	0.25	% v/v	FALL	A					
9	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A	20 f	8 e	3 f	0 g	0 e
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D					
10	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A	25 f	94 a	95 a	83 c	81 b
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	7DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D					

General Evaluation of Fall- and Spring-Applied Residual Herbicides in Soybean.

Trial ID: 12-YRC-GenFall
Location: Young Res. Center
Investigator: Bryan Young

Pest Code								AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR
Crop Code												
Rating Date								4-23-12	5-1-12	5-15-12	5-31-12	6-28-12
Rating Type								Control	Control	Control	Control	Control
Rating Unit								Percent	Percent	Percent	Percent	Percent
Rating Timing									0 DAP	14 DAP	6 DA-C	34 DA-C
Trt-Eval Interval								-1 DA-B	7 DA-B	21 DA-B	0 DA-D	28 DA-D
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
11	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A	18 fg	13 e	3 f	34 e	40 d
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
	ANTHEM	2.15	SE	0.101	lb ai/a	6	oz/a	V1-V2	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V1-V2	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V1-V2	C					
12	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	45 de	91 a	96 a	87 abc	80 b
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	7DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D					
13	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	48 de	94 a	98 a	96 a	93 ab
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	7DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D					
14	CANOPY EX	29.5	WG	0.037	lb ai/a	2	oz/a	FALL	A	53 cd	97 a	98 a	91 abc	93 ab
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
	AUTHORITY FIRST	70	WG	0.28	lb ai/a	6.4	oz/a	7DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	7DBP	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D					
15	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	45 de	97 a	98 a	95 ab	92 ab
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	7DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	7DBP	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D					
16	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	FALL	A	31 ef	97 a	97 a	95 ab	96 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	7DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	7DBP	B					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	7DBP	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	7DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	V2-V4	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	V2-V4	D					
LSD (P=.05)										17.7	13.3	11.7	10.1	13.7
Standard Deviation										12.4	9.3	8.2	7.1	9.6
CV										25.77	14.25	15.24	14.4	20.75
Replicate F										0.908	1.438	2.636	1.075	1.594
Replicate Prob(F)										0.4448	0.2442	0.0611	0.3692	0.2040
Treatment F										15.082	54.707	104.902	125.813	66.485
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001

Southern Illinois University

General Evaluation of Fall- and Spring-Applied Residual Herbicides in Soybean.

Trial ID: 12-YRC-GenFall
Location: Young Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Valent, FMC.
2. Ratings: WC 21-28 DA-A, April 1, May 1, and at planting.
   CI/WC at 14 DAP and 0 and 28 DA-D.
3. Yield.
4. ERICA-HR = Herbicide-resistant marestail (glyphosate).
   AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
   DAP = Days after planting.
5. The scheduled May 1 rating was done on April 23 such that it was prior to application B (7DBP).
   The at planting rating was done on May 1.
6. By 4-23-12 STEME in the nontreated plots was senescing naturally and could no longer be evaluated.
   By 5-1-12 LAMAM in the nontreated plots was senescing naturally and could no longer be evaluated.
   By 5-15-12 VERAR in the nontreated plots was senescing naturally and could no longer be evaluated.
7. Harvested 10-16-12, (2) 30 inch rows by 27 ft.

Southern Illinois University

Fall and Spring Residual Herbicides for Marestail Control in Soybean.

Trial ID: 12-YRC-MonFall
Location: Young Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young **Title:** Professor
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 11-23-11

Trial Location

City: Murphysboro
State/Prov.: IL
Postal Code: 62966
Country: USA

Objectives:
Evaluate the benefit of fall- and spring-applied residual herbicides
for control of marestail in soybean.

Personnel

Study Director: Bryan Young **Title:** Professor
Affiliation: SIUC
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 5-1-12
Planting Method: SEEDED **Rate, Unit:** 155000 S/A
Depth, Unit: 2.0 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** ERICA - Conyza canadensis (L.) Crong.
Common Name: horseweed
Description: glyphosate-resistant marestail

Pest 2 Type: W **Code:** LAMAM - Lamium amplexicaule L.
Common Name: henbit

Pest 3 Type: W **Code:** STEME - Stellaria media (L.) Vill.
Common Name: chickweed, common

Pest 4 Type: W **Code:** VERPG - Veronica peregrina L.
Common Name: speedwell, purslane

Pest 5 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Pest 6 Type: W **Code:** PANDI - Panicum dichotomiflorum Michx.
Common Name: panicum, fall

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 27 LB/A, P2O5 69 LB/A, K2O 90 LB/A

Soil Description

% OM: 1.82 **Texture:** SIL SILT LOAM
pH: 6.2 **Soil Name:** ALVIN
CEC: 6.16

Southern Illinois University

Fall and Spring Residual Herbicides for Marestail Control in Soybean.

Trial ID: 12-YRC-MonFall
Location: Young Res. Center
Investigator: Bryan Young

Additional Measured Elements

Element	Quantity	Unit
P1	154	LB/A
K	264	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

Application Description

	A	B	C	D
Application Date:	11-23-11	3-29-12	4-24-12	5-29-12
Time of Day:	14:30	10:45	8:30	14:00
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	FALL	30DBP	1-7DBP	POST
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	RJW	LAH	LAH	LAH
Air Temperature, Unit:	52 F	69 F	59 F	89 F
% Relative Humidity:	74	63	53	37
Wind Velocity, Unit:	2 MPH	3 MPH	4 MPH	4 MPH
Wind Direction:	E	N	SW	SE
Dew Presence (Y/N):	N no	N no	Y yes	N no
Soil Temperature, Unit:	51 F	63 F	52 F	83 F
Soil Moisture:	ABONOR	NORMAL	NORMAL	NORMAL
% Cloud Cover:	100	40	95	40
Next Rain Occurred On:	11-26-11	4-3-12	4-30-12	5-31-12

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	DESC	DESC	DESC	DESC
Stage Majority, Percent:	NA	NA	NA	V3
Stage Minimum, Percent:				V2
Stage Maximum, Percent:				V3
Height, Unit:				5 IN
Height Minimum, Maximum:				3 5

Southern Illinois University

Fall and Spring Residual Herbicides for Marestail Control in Soybean.

Trial ID: 12-YRC-MonFall
Location: Young Res. Center
Investigator: Bryan Young

Pest Stage At Each Application

	A		B		C		D	
Pest 1 Code, Type, Scale:	ERICA	W DESC	ERICA	W DESC	ERICA	W DESC	ERICA	W DESC
Stage Majority, Percent:	10		15		10		40	
Stage Minimum, Percent:	5		5		6		20	
Stage Maximum, Percent:	15		25		20		50	
Height, Unit:	0.5	IN	1.5	IN	4	IN	10	IN
Height Minimum, Maximum:	0.5	1.5	0.5	3	2	6	4	14
Density, Unit:	1	FT2	1	FT2	0.5	FT2	1	FT2
Pest 2 Code, Type, Scale:	LAMAM	W DESC	LAMAM	W DESC	LAMAM	W DESC	LAMAM	W DESC
Stage Majority, Percent:	8		15		NA		NA	
Stage Minimum, Percent:	2		12					
Stage Maximum, Percent:	10		20					
Height, Unit:	2	IN	8	IN				
Height Minimum, Maximum:	0.5	4	5	10				
Density, Unit:	1	FT2	1	FT2				
Pest 3 Code, Type, Scale:	STEME	W DESC	STEME	W DESC	STEME	W DESC	STEME	W DESC
Stage Majority, Percent:	15		50+		NA		NA	
Stage Minimum, Percent:	4							
Stage Maximum, Percent:	20							
Height, Unit:	0.5	IN	10	IN				
Height Minimum, Maximum:	0.5	1	8	12				
Density, Unit:	0.8	FT2	0.5	FT2				
Pest 4 Code, Type, Scale:	VERPG	W DESC	VERPG	W DESC	VERPG	W DESC	VERPG	W DESC
Stage Majority, Percent:	NA		50+		50+		NA	
Stage Minimum, Percent:			30		30			
Stage Maximum, Percent:			50+		50+			
Height, Unit:			9	IN	9	IN		
Height Minimum, Maximum:			8	10	8	10		
Density, Unit:			20	FT2	20	FT2		
Pest 5 Code, Type, Scale:	AMATA	W DESC	AMATA	W DESC	AMATA	W DESC	AMATA	W DESC
Stage Majority, Percent:	NA		Coty		6		20	
Stage Minimum, Percent:			Coty		Coty		Coty	
Stage Maximum, Percent:			2		8		50+	
Height, Unit:			0.5	IN	3	IN	8	IN
Height Minimum, Maximum:			0.25	0.5	0.25	5	0.25	24
Density, Unit:			0.3	FT2	0.5	FT2	0.5	FT2
Pest 6 Code, Type, Scale:	PANDI	W DESC	PANDI	W DESC	PANDI	W DESC	PANDI	W DESC
Stage Majority, Percent:	NA		NA		NA		10	
Stage Minimum, Percent:							6	
Stage Maximum, Percent:							20	
Height, Unit:							6	IN
Height Minimum, Maximum:							3	12
Density, Unit:							1	FT2

Application Equipment

	A	B	C	D
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan	Flat fan
Nozzle Size:	XR 8002	XR 8002	XR 8002	XR 8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA

Fall and Spring Residual Herbicides for Marestail Control in Soybean.

Trial ID: 12-YRC-MonFall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-29-12 Injury Percent 0 DA-D	ERICA-HR 3-29-12 Control Percent 0 DA-B	ERICA-HR 4-23-12 Control Percent -1 DA-C	ERICA-HR 5-29-12 Control Percent 0 DA-D
1	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B	0 a		64 f	63 d
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D				
	FIRSTRATE	84	WG	0.0158	lb ai/a	0.3	oz/a	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				
2	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B	0 a		88 cde	87 bc
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	30DBP	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				
3	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B	0 a		99 a	98 a
	CLARITY	4	SL	0.5	lb ae/a	0.5	qt/a	30DBP	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				
4	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C	0 a			92 ab
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-7DBP	C				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				
5	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C	0 a			93 a
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	1-7DBP	C				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				
6	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	FALL	A	0 a	94 a	86 de	95 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	FALL	A				
	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	FALL	A				
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	FALL	A				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C				
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-7DBP	C				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				
7	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B	0 a		98 a	96 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	30DBP	B				
	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	30DBP	B				
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz wt/a	30DBP	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	30DBP	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Fall and Spring Residual Herbicides for Marestail Control in Soybean.

Trial ID: 12-YRC-MonFall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-29-12 Injury Percent 0 DA-D	ERICA-HR 3-29-12 Control Percent 0 DA-B	ERICA-HR 4-23-12 Control Percent -1 DA-C	ERICA-HR 5-29-12 Control Percent 0 DA-D
8	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	FALL	A	0 a	75 b	54 g	96 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	FALL	A				
	AUTHORITY MTZ	45	WG	0.31	lb ai/a	11	oz/a	FALL	A				
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	FALL	A				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C				
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-7DBP	C				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				
9	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B	0 a		84 e	82 c
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	30DBP	B				
	AUTHORITY MTZ	45	WG	0.31	lb ai/a	11	oz/a	30DBP	B				
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	30DBP	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	30DBP	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				
10	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	FALL	A	0 a	99 a	91 b-e	98 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	FALL	A				
	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A				
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	FALL	A				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C				
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-7DBP	C				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				
11	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B	0 a		99 a	96 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	30DBP	B				
	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	30DBP	B				
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	30DBP	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	30DBP	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				
12	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	FALL	A	0 a	78 b	60 fg	97 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	FALL	A				
	WARRANT	3	CS	1.125	lb ai/a	48	fl oz/a	FALL	A				
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C				
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-7DBP	C				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				
13	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B	0 a		95 ab	93 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	30DBP	B				
	WARRANT	3	CS	1.125	lb ai/a	48	fl oz/a	30DBP	B				
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	30DBP	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				

Fall and Spring Residual Herbicides for Marestail Control in Soybean.

Trial ID: 12-YRC-MonFall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 5-29-12 Injury Percent 0 DA-D	ERICA-HR 3-29-12 Control Percent 0 DA-B	ERICA-HR 4-23-12 Control Percent -1 DA-C	ERICA-HR 5-29-12 Control Percent 0 DA-D
14	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	FALL	A	0 a	97 a	84 e	98 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	FALL	A				
	AUTHORITY FIRST	70	WG	0.282	lb ai/a	6.45	oz/a	FALL	A				
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	FALL	A				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C				
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-7DBP	C				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				
15	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B	0 a		99 a	98 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	30DBP	B				
	AUTHORITY FIRST	70	WG	0.282	lb ai/a	6.45	oz/a	30DBP	B				
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	30DBP	B				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	30DBP	B				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				
16	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	FALL	A	0 a	96 a	93 abc	97 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	FALL	A				
	CANOPY EX	29.5	WG	0.037	lb ai/a	2	oz/a	FALL	A				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C				
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C				
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-7DBP	C				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				
17	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	FALL	A	0 a	97 a	93 a-d	97 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	FALL	A				
	CANOPY EX	29.5	WG	0.037	lb ai/a	2	oz/a	FALL	A				
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C				
	AUTHORITY FIRST	70	WG	0.282	lb ai/a	6.45	oz/a	1-7DBP	C				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C				
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D				
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D				
LSD (P=.05)										0.0	11.7	6.8	6.0
Standard Deviation										0.0	7.9	4.8	4.2
CV										0.0	8.71	5.54	4.54
Replicate F										0.000	0.626	0.308	1.319
Replicate Prob(F)										1.0000	0.6074	0.8196	0.2792
Treatment F										0.000	6.426	38.423	16.863
Treatment Prob(F)										1.0000	0.0009	0.0001	0.0001

Fall and Spring Residual Herbicides for Marestail Control in Soybean.

Trial ID: 12-YRC-MonFall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	LAMAM	LAMAM	STEME	VERPG	VERPG
	Pest Code									LAMAM	LAMAM	STEME	VERPG	VERPG
	Crop Code													
	Rating Date									3-29-12	4-23-12	3-29-12	3-29-12	4-23-12
	Rating Type									Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent
	Rating Timing													
	Trt-Eval Interval									0 DA-B	-1 DA-C	0 DA-B	0 DA-B	-1 DA-C
1	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B		96 ab			99 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D					
	FIRSTRATE	84	WG	0.0158	lb ai/a	0.3	oz/a	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					
2	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B		99 a			99 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	30DBP	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					
3	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B		98 a			99 a
	CLARITY	4	SL	0.5	lb ae/a	0.5	qt/a	30DBP	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					
4	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C					
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-7DBP	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					
5	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C					
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	1-7DBP	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					
6	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	FALL	A	99 a	98 a	99 a	90 ab	84 b
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	FALL	A					
	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	FALL	A					
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	FALL	A					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C					
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-7DBP	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					
7	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B		99 a			99 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	30DBP	B					
	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	30DBP	B					
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz wt/a	30DBP	B					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	30DBP	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					

Fall and Spring Residual Herbicides for Marestail Control in Soybean.

Trial ID: 12-YRC-MonFall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	LAMAM 3-29-12 Control Percent 0 DA-B	LAMAM 4-23-12 Control Percent -1 DA-C	STEME 3-29-12 Control Percent 0 DA-B	VERPG 3-29-12 Control Percent 0 DA-B	VERPG 4-23-12 Control Percent -1 DA-C
8	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	FALL	A	88 b	83 c	97 b	70 c	35 c
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	FALL	A					
	AUTHORITY MTZ	45	WG	0.31	lb ai/a	11	oz/a	FALL	A					
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	FALL	A					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C					
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-7DBP	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					
9	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B		98 a			99 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	30DBP	B					
	AUTHORITY MTZ	45	WG	0.31	lb ai/a	11	oz/a	30DBP	B					
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	30DBP	B					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	30DBP	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					
10	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	FALL	A	99 a	98 a	99 a	93 a	82 b
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	FALL	A					
	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A					
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	FALL	A					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C					
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-7DBP	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					
11	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B		99 a			99 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	30DBP	B					
	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	30DBP	B					
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	30DBP	B					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	30DBP	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					
12	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	FALL	A	96 a	93 b	99 a	81 b	41 c
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	FALL	A					
	WARRANT	3	CS	1.125	lb ai/a	48	fl oz/a	FALL	A					
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C					
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-7DBP	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					
13	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B		99 a			99 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	30DBP	B					
	WARRANT	3	CS	1.125	lb ai/a	48	fl oz/a	30DBP	B					
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	30DBP	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					

Fall and Spring Residual Herbicides for Marestail Control in Soybean.

Trial ID: 12-YRC-MonFall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	LAMAM	LAMAM	STEME	VERPG	VERPG
	Pest Code									LAMAM	LAMAM	STEME	VERPG	VERPG
	Crop Code													
	Rating Date									3-29-12	4-23-12	3-29-12	3-29-12	4-23-12
	Rating Type									Control	Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent	Percent
	Rating Timing													
	Trt-Eval Interval									0 DA-B	-1 DA-C	0 DA-B	0 DA-B	-1 DA-C
14	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	FALL	A	98 a	96 ab	99 a	50 d	21 d
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	FALL	A					
	AUTHORITY FIRST	70	WG	0.282	lb ai/a	6.45	oz/a	FALL	A					
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	FALL	A					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C					
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-7DBP	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					
15	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B		99 a			99 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	30DBP	B					
	AUTHORITY FIRST	70	WG	0.282	lb ai/a	6.45	oz/a	30DBP	B					
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	30DBP	B					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	30DBP	B					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					
16	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	FALL	A	98 a	97 a	99 a	91 ab	87 ab
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	FALL	A					
	CANOPY EX	29.5	WG	0.037	lb ai/a	2	oz/a	FALL	A					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C					
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C					
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-7DBP	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					
17	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	FALL	A	98 a	97 a	99 a	91 ab	88 ab
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	FALL	A					
	CANOPY EX	29.5	WG	0.037	lb ai/a	2	oz/a	FALL	A					
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C					
	AUTHORITY FIRST	70	WG	0.282	lb ai/a	6.45	oz/a	1-7DBP	C					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C					
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D					
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D					
	LSD (P=.05)									3.7	3.8	1.3	10.9	13.6
	Standard Deviation									2.5	2.7	0.9	7.3	9.5
	CV									2.61	2.78	0.88	9.06	11.63
	Replicate F									1.652	1.643	1.000	1.215	0.999
	Replicate Prob(F)									0.2128	0.1938	0.4155	0.3329	0.4028
	Treatment F									9.899	9.777	3.000	18.654	31.247
	Treatment Prob(F)									0.0001	0.0001	0.0327	0.0001	0.0001

Fall and Spring Residual Herbicides for Marestail Control in Soybean.

Trial ID: 12-YRC-MonFall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 4-23-12 Control Percent -1 DA-C	AMATA-HR 5-29-12 Control Percent 0 DA-D	PANDI 5-29-12 Control Percent 0 DA-D
1	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B	92 a	20 j	3 g
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D			
	FIRSTRATE	84	WG	0.0158	lb ai/a	0.3	oz/a	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			
2	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B	97 a	31 ij	0 g
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	30DBP	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			
3	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B	99 a	45 hi	0 g
	CLARITY	4	SL	0.5	lb ae/a	0.5	qt/a	30DBP	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			
4	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C		77 a-d	84 abc
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-7DBP	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			
5	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C		81 abc	81 bcd
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	1-7DBP	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			
6	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	FALL	A	68 b	61 efg	74 de
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	FALL	A			
	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	FALL	A			
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	FALL	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C			
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-7DBP	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			
7	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B	99 a	69 c-f	78 bcd
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	30DBP	B			
	VALOR XLT	40.3	WG	0.0756	lb ai/a	3	oz/a	30DBP	B			
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz wt/a	30DBP	B			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	30DBP	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			

Fall and Spring Residual Herbicides for Marestail Control in Soybean.

Trial ID: 12-YRC-MonFall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 4-23-12 Control Percent -1 DA-C	AMATA-HR 5-29-12 Control Percent 0 DA-D	PANDI 5-29-12 Control Percent 0 DA-D
8	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	FALL	A	26 e	66 c-f	84 abc
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	FALL	A			
	AUTHORITY MTZ	45	WG	0.31	lb ai/a	11	oz/a	FALL	A			
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	FALL	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C			
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-7DBP	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			
9	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B	99 a	55 fgh	15 f
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	30DBP	B			
	AUTHORITY MTZ	45	WG	0.31	lb ai/a	11	oz/a	30DBP	B			
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	30DBP	B			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	30DBP	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			
10	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	FALL	A	48 d	55 fgh	75 cde
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	FALL	A			
	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A			
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	FALL	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C			
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-7DBP	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			
11	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B	99 a	73 b-e	79 bcd
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	30DBP	B			
	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	30DBP	B			
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	30DBP	B			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	30DBP	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			
12	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	FALL	A	63 bc	65 def	79 bcd
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	FALL	A			
	WARRANT	3	CS	1.125	lb ai/a	48	fl oz/a	FALL	A			
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C			
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-7DBP	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			
13	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B	98 a	73 b-e	66 e
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	30DBP	B			
	WARRANT	3	CS	1.125	lb ai/a	48	fl oz/a	30DBP	B			
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	30DBP	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			

Fall and Spring Residual Herbicides for Marestail Control in Soybean.

Trial ID: 12-YRC-MonFall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR	AMATA-HR	PANDI
	Pest Code									AMATA-HR	AMATA-HR	PANDI
	Crop Code											
	Rating Date									4-23-12	5-29-12	5-29-12
	Rating Type									Control	Control	Control
	Rating Unit									Percent	Percent	Percent
	Rating Timing											
	Trt-Eval Interval									-1 DA-C	0 DA-D	0 DA-D
14	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	FALL	A	49 cd	61 efg	86 ab
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	FALL	A			
	AUTHORITY FIRST	70	WG	0.282	lb ai/a	6.45	oz/a	FALL	A			
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	FALL	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C			
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-7DBP	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			
15	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	30DBP	B	99 a	85 ab	83 a-d
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	30DBP	B			
	AUTHORITY FIRST	70	WG	0.282	lb ai/a	6.45	oz/a	30DBP	B			
	EXPRESS	50	SG	0.00313	lb ai/a	0.1	oz/a	30DBP	B			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	30DBP	B			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	30DBP	B			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			
16	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	FALL	A	28 e	48 gh	74 cde
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	FALL	A			
	CANOPY EX	29.5	WG	0.037	lb ai/a	2	oz/a	FALL	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C			
	SHARPEN	2.85	SC	0.0223	lb ai/a	1	fl oz/a	1-7DBP	C			
	MSO (MSO ULTRA)	100	SL	1	% v/v	1	% v/v	1-7DBP	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			
17	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	FALL	A	60 bcd	89 a	92 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	0.5	qt/a	FALL	A			
	CANOPY EX	29.5	WG	0.037	lb ai/a	2	oz/a	FALL	A			
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	FALL	A			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	1-7DBP	C			
	AUTHORITY FIRST	70	WG	0.282	lb ai/a	6.45	oz/a	1-7DBP	C			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	1-7DBP	C			
	ROUNDUP POWERMAX	4.5	SL	0.75	lb ae/a	21.3	fl oz/a	POST	D			
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	POST	D			
	LSD (P=.05)									13.8	15.3	10.0
	Standard Deviation									9.7	10.7	7.0
	CV									12.91	17.31	11.3
	Replicate F									1.649	0.089	0.532
	Replicate Prob(F)									0.1926	0.9660	0.6628
	Treatment F									32.687	11.790	91.864
	Treatment Prob(F)									0.0001	0.0001	0.0001

Southern Illinois University

Fall and Spring Residual Herbicides for Marestail Control in Soybean.

Trial ID: 12-YRC-MonFall
Location: Young Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Monsanto (24-05).
2. Ratings: WC prior to B, C, and D applications.
3. Target marestail.
4. ERICA-HR = Herbicide-resistant marestail (glyphosate).
   AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
5. At application C, for treatments 4 and 5, ERICA was twice as big as in other plots.
6. Not harvested.

Southern Illinois University

Roundup plus Clarity Nozzle by Adjuvant Study.

Trial ID: 12-FagerS-NozzleAdj
Location: Murphysboro, IL
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 8-30-12

Trial Location

City: Murphysboro
State/Prov.: IL
Postal Code: 62966
Country: USA

Objectives:
Evalaute efficacy of glyphosate plus dicamba on glyphosate-resistant waterhemp as influenced by spray nozzles and adjuvants.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: NONE - Non-crop

Pest Description

Pest 1 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	NONE	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.87 **Texture:** SIL SILT LOAM
pH: 5.5 **Soil Name:** ALVIN
CEC: 7.06

Additional Measured Elements

Element	Quantity	Unit
P1	172	LB/A
K	446	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

Roundup plus Clarity Nozzle by Adjuvant Study.

Trial ID: 12-FagerS-NozzleAdj
Location: Murphysboro, IL
Investigator: Bryan Young

Application Description

	A
Application Date:	8-30-12
Time of Day:	8:30
Application Method:	Spray
Application Timing:	6-8"W
Application Placement:	BROFOL
Applied By:	JRK
Air Temperature, Unit:	82 F
% Relative Humidity:	69
Wind Velocity, Unit:	2 MPH
Wind Direction:	S
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	80 F
Soil Moisture:	BELNOR
% Cloud Cover:	0
Next Rain Occurred On:	8-31-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	NONE
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMATA W DESC
Stage Majority, Percent:	12
Stage Minimum, Percent:	4
Stage Maximum, Percent:	25
Height, Unit:	8 IN
Height Minimum, Maximum:	1 13

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Nozzle Type:	See
Nozzle Size:	comment
Boom Length, Unit:	6.67 FT

Roundup plus Clarity Nozzle by Adjuvant Study.

Trial ID: 12-FagerS-NozzleAdj
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 9-6-12 Control Percent 7 DA-A	AMATA-HR 9-13-12 Control Percent 14 DA-A	AMATA-HR 9-27-12 Control Percent 28 DA-A
1	XR 11004 at 40 PSI - 10 GPA - 12 MPH									81 c	88 a	86 a
	ROUNDUP POWERMAX	4.5	SL	1	lb ae/a	28.4	fl oz/a	6-8"W	A			
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	6-8"W	A			
	AMS	100	SG	1	% w/w	1	% w/w	6-8"W	A			
2	AIXR 11004 at 40 PSI - 10 GPA - 12 MPH									77 c	86 a	86 a
	ROUNDUP POWERMAX	4.5	SL	1	lb ae/a	28.4	fl oz/a	6-8"W	A			
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	6-8"W	A			
	AMS	100	SG	1	% w/w	1	% w/w	6-8"W	A			
3	AI 11004 at 40 PSI - 10 GPA - 12 MPH									83 bc	88 a	90 a
	ROUNDUP POWERMAX	4.5	SL	1	lb ae/a	28.4	fl oz/a	6-8"W	A			
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	6-8"W	A			
	AMS	100	SG	1	% w/w	1	% w/w	6-8"W	A			
4	TTI 11004 at 40 PSI - 10 GPA - 12 MPH									80 c	86 a	88 a
	ROUNDUP POWERMAX	4.5	SL	1	lb ae/a	28.4	fl oz/a	6-8"W	A			
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	6-8"W	A			
	AMS	100	SG	1	% w/w	1	% w/w	6-8"W	A			
5	TTI 11004 at 40 PSI - 10 GPA - 12 MPH									90 a	92 a	92 a
	ROUNDUP POWERMAX	4.5	SL	1	lb ae/a	28.4	fl oz/a	6-8"W	A			
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	6-8"W	A			
	AMS	100	SG	1	% w/w	1	% w/w	6-8"W	A			
	DIRECT	30	SL	0.0234	% v/v	3	fl oz/100 gal	6-8"W	A			
6	AI 11006 at 65 PSI - 15 GPA - 15 MPH									88 ab	92 a	92 a
	ROUNDUP POWERMAX	4.5	SL	1	lb ae/a	28.4	fl oz/a	6-8"W	A			
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	6-8"W	A			
	AMS	100	SG	1	% w/w	1	% w/w	6-8"W	A			
	DIRECT	30	SL	0.0234	% v/v	3	fl oz/100 gal	6-8"W	A			
7	NONTREATED									0 d	0 b	0 b
LSD (P=.05)										6.9	6.6	6.6
Standard Deviation										3.9	3.7	3.7
CV										5.43	4.9	4.88
Replicate F										0.152	0.456	0.313
Replicate Prob(F)										0.8604	0.6444	0.7369
Treatment F										202.022	244.614	245.983
Treatment Prob(F)										0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Roundup plus Clarity Nozzle by Adjuvant Study.

Trial ID: 12-FagerS-NozzleAdj
Location: Murphysboro, IL
Investigator: Bryan Young

Trial Comments

1. Protocol: SIU.
2. Ratings: WC at 7, 14, and 28 DAT.
   Photos as appropriate.
3. Spray nozzles, GPA, PSI and speed are per treatemt, see treatment list.
4. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
5. Not harvested, non-crop.

Southern Illinois University

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 12-FagerS-ISA-Fall
Location: Murphysboro, IL
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 11-23-11

Trial Location

City: Murphysboro
State/Prov.: IL
Postal Code: 62966
Country: USA

Objectives:
Determine the performance of fall and spring applications of residual herbicides
for soybean with the primary focus on residual waterhemp control in spring and summer.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 4-29-12
Planting Method: SEEDED Seeded **Rate, Unit:** 155000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** ERICA - Conyza canadensis (L.) Crong.
Common Name: horseweed
Description: glyphosate-resistant marestail

Pest 2 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Pest 3 Type: W **Code:** VIORA - Viola bicolor Pursh
Common Name: pansy, field

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.87 **Texture:** SIL SILT LOAM
pH: 5.5 **Soil Name:** ALVIN
CEC: 7.06

Additional Measured Elements

Element	Unit
P1	LB/A
K	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

Southern Illinois University

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 12-FagerS-ISA-Fall
Location: Murphysboro, IL
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description	Interval	Unit	Min Temp	Max Temp	Temp Unit
1.	4-10-12					7	DAY	30.1	79.2	F
2.	4-13-12	0.22	IN	RAIN	rain					
3.	4-15-12	0.47	IN	RAIN	rain					
4.	4-16-12	0.29	IN	RAIN	rain					
5.	4-17-12					7	DAY	36.7	75.6	F
6.	4-20-12	0.13	IN	RAIN	rain					
7.	4-22-12	0.13	IN	RAIN	rain					
8.	4-24-12					7	DAY	43.7	80.9	F
9.	4-27-12	0.04	IN	RAIN	rain					
10.	4-30-12	0.55	IN	RAIN	rain					
11.	5-1-12					7	DAY	59.1	91.3	F
12.	5-6-12	0.14	IN	RAIN	rain					
13.	5-7-12	0.07	IN	RAIN	rain					
14.	5-8-12					7	DAY	43.3	79	F
15.	5-15-12					7	DAY	44.9	89.1	F
16.	5-20-12	0.93	IN	RAIN	rain					
17.	5-22-12					7	DAY	45.5	92.8	F
18.	5-29-12					7	DAY	46.3	89.8	F
19.	5-30-12	0.02	IN	RAIN	rain					
20.	5-31-12	0.14	IN	RAIN	rain					
21.	6-4-12	0.49	IN	RAIN	rain					
22.	6-5-12					7	DAY	48.5	88.8	F
23.	6-11-12	0.21	IN	RAIN	rain					
24.	6-12-12					7	DAY	49.8	91.1	F
25.	6-17-12	0.03	IN	RAIN	rain					
26.	6-19-12					7	DAY	55.4	96.4	F
27.	6-26-12					7	DAY	51.1	105.4	F
28.	7-3-12					7	DAY	71.1	105	F
29.	7-8-12	0.07	IN	RAIN	rain					
30.	7-9-12	0.12	IN	RAIN	rain					
31.	7-10-12					7	DAY	65.9	93.9	F
32.	7-14-12	0.02	IN	RAIN	rain					
33.	7-17-12					7	DAY	60	102.3	F
34.	7-17-12	0.03	IN	RAIN	rain					
35.	7-24-12					7	DAY	64.1	102.1	F
36.	7-26-12	1.41	IN	RAIN	rain					
37.	7-29-12	0.24	IN	RAIN	rain					
38.	7-31-12					7	DAY	62.7	97.9	F
39.	8-2-12	0.08	IN	RAIN	rain					
40.	8-4-12	3.29	IN	RAIN	rain					
41.	8-5-12	0.21	IN	RAIN	rain					
42.	8-7-12					7	DAY	54.1	97.2	F

Southern Illinois University

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 12-FagerS-ISA-Fall
Location: Murphysboro, IL
Investigator: Bryan Young

Application Description

	A	B	C	D
Application Date:	11-23-11	3-29-12	4-30-12	5-31-12
Time of Day:	15:30	11:30	11:00	9:00
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	FALL	EPP30	PRE	POST
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Applied By:	LAH	LAH	LAH	JRK
Air Temperature, Unit:	50 F	75 F	78 F	79 F
% Relative Humidity:	81	40	66	61
Wind Velocity, Unit:	0 MPH	1 MPH	3 MPH	2 MPH
Wind Direction:	NA	N	S	NE
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	51 F	66 F	69 F	70 F
Soil Moisture:	ABONOR	NORMAL	NORMAL	NORMAL
% Cloud Cover:	100	30	100	50
Next Rain Occurred On:	11-26-11	4-3-12	5-6-12	6-4-12

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:	BBCH	DESC	DESC	DESC
Stage Majority, Percent:	NA	NA	NA	V4
Stage Minimum, Percent:				V2
Stage Maximum, Percent:				V4
Height, Unit:				8 IN
Height Minimum, Maximum:				4 8

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	ERICA W DESC	ERICA W DESC	ERICA W DESC	ERICA W DESC
Stage Majority, Percent:	NA	4	12	40
Stage Minimum, Percent:		Coty	Coty	10
Stage Maximum, Percent:		15	25	60
Height, Unit:		0.5 IN	3 IN	8 IN
Height Minimum, Maximum:		0.5 1	0.25 5	2 16
Density, Unit:		2 FT2	3 FT2	3 FT2
Pest 2 Code, Type, Scale:	AMATA W DESC	AMATA W DESC	AMATA W DESC	AMATA W DESC
Stage Majority, Percent:	NA	2	8	30
Stage Minimum, Percent:		Coty	Coty	4
Stage Maximum, Percent:		4	20	40
Height, Unit:		0.5 IN	3 IN	12 IN
Height Minimum, Maximum:		0.5 1	0.25 6	1 20
Density, Unit:		1 FT2	1 FT2	3 FT2
Pest 3 Code, Type, Scale:	VIORA W DESC	VIORA W DESC	VIORA W DESC	VIORA W DESC
Stage Majority, Percent:	NA	NA	NA	NA

Application Equipment

	A	B	C	D
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type:	XR	XR	XR	XR
Nozzle Size:	8002	8002	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 12-FagerS-ISA-Fall
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-16-12 Yield bu/A	GLXMA 4-29-12 Injury Percent -1 DA-C	GLXMA 6-28-12 Injury Percent 28 DA-D
1	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A	1 e	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
2	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	FALL	A	1 e	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
3	VALOR XLT	40.3	WG			3	oz/a	FALL	A	2 de	0 a	0 a
	VALOR SX	51	WG	0.056	lb ai/a			FALL	A			
	CLASSIC	25	WG	0.0194	lb ai/a			FALL	A			
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
4	VALOR XLT	40.3	WG			4	oz/a	FALL	A	0 e	0 a	0 a
	VALOR SX	51	WG	0.075	lb ai/a			FALL	A			
	CLASSIC	25	WG	0.0258	lb ai/a			FALL	A			
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
5	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	FALL	A	13 a-e	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A			
	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	EPP30	B			
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
6	VALOR XLT	40.3	WG			1.5	oz/a	FALL	A	27 a	0 a	0 a
	VALOR SX	51	WG	0.028	lb ai/a			FALL	A			
	CLASSIC	25	WG	0.0097	lb ai/a			FALL	A			
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A			
	VALOR XLT	40.3	WG			1.5	oz/a	EPP30	B			
	VALOR SX	51	WG	0.028	lb ai/a			EPP30	B			
	CLASSIC	25	WG	0.0097	lb ai/a			EPP30	B			
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 12-FagerS-ISA-Fall
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-16-12 Yield bu/A	GLXMA 4-29-12 Injury Percent -1 DA-C	GLXMA 6-28-12 Injury Percent 28 DA-D
7	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	FALL	A	11 b-e	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A			
	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	PRE	C			
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
8	VALOR XLT	40.3	WG			1.5	oz/a	FALL	A	19 abc	0 a	0 a
	VALOR SX	51	WG	0.028	lb ai/a			FALL	A			
	CLASSIC	25	WG	0.0097	lb ai/a			FALL	A			
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A			
	VALOR XLT	40.3	WG			1.5	oz/a	PRE	C			
	VALOR SX	51	WG	0.028	lb ai/a			PRE	C			
	CLASSIC	25	WG	0.0097	lb ai/a			PRE	C			
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
9	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	EPP30	B	19 abc	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B			
	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	PRE	C			
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
10	VALOR XLT	40.3	WG			1.5	oz/a	EPP30	B	21 ab	0 a	0 a
	VALOR SX	51	WG	0.028	lb ai/a			EPP30	B			
	CLASSIC	25	WG	0.0097	lb ai/a			EPP30	B			
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B			
	VALOR XLT	40.3	WG			1.5	oz/a	PRE	C			
	VALOR SX	51	WG	0.028	lb ai/a			PRE	C			
	CLASSIC	25	WG	0.0097	lb ai/a			PRE	C			
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
11	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	EPP30	B	15 a-e	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
12	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	EPP30	B	17 a-d	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 12-FagerS-ISA-Fall
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-16-12 Yield bu/A	GLXMA 4-29-12 Injury Percent -1 DA-C	GLXMA 6-28-12 Injury Percent 28 DA-D
13	VALOR XLT	40.3	WG			3	oz/a	EPP30	B	23 ab	0 a	0 a
	VALOR SX	51	WG	0.056	lb ai/a			EPP30	B			
	CLASSIC	25	WG	0.0194	lb ai/a			EPP30	B			
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
14	VALOR XLT	40.3	WG			4	oz/a	EPP30	B	19 abc	0 a	0 a
	VALOR SX	51	WG	0.075	lb ai/a			EPP30	B			
	CLASSIC	25	WG	0.0258	lb ai/a			EPP30	B			
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B			
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
15	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	C	15 a-e	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
16	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	PRE	C	9 b-e	0 a	0 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
17	VALOR XLT	40.3	WG			3	oz/a	PRE	C	1 e	0 a	0 a
	VALOR SX	51	WG	0.056	lb ai/a			PRE	C			
	CLASSIC	25	WG	0.0194	lb ai/a			PRE	C			
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
18	VALOR XLT	40.3	WG			4	oz/a	PRE	C	5 cde	0 a	0 a
	VALOR SX	51	WG	0.075	lb ai/a			PRE	C			
	CLASSIC	25	WG	0.0258	lb ai/a			PRE	C			
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C			
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
19	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A	1 e	0 a	0 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A			
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
20	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B	1 e	0 a	0 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B			
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 12-FagerS-ISA-Fall
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 10-16-12 Yield bu/A	GLXMA 4-29-12 Injury Percent -1 DA-C	GLXMA 6-28-12 Injury Percent 28 DA-D
21	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C	2 de	0 a	0 a
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C			
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	POST	D			
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D			
LSD (P=.05)										15.9	0.0	0.0
Standard Deviation										9.7	0.0	0.0
CV										91.12	0.0	0.0
Replicate F										2.175	0.000	0.000
Replicate Prob(F)										0.1268	1.0000	1.0000
Treatment F										2.586	0.000	0.000
Treatment Prob(F)										0.0052	1.0000	1.0000

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 12-FagerS-ISA-Fall
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR 3-29-12 Control Percent 0 DA-B	ERICA-HR 4-29-12 Control Percent -1 DA-C	ERICA-HR 5-31-12 Control Percent 0 DA-D	ERICA-HR 6-28-12 Control Percent 28 DA-D
1	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A	99 a	85 b	63 f	48 d
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
2	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	FALL	A	99 a	95 a	88 b	80 b
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
3	VALOR XLT	40.3	WG			3	oz/a	FALL	A	98 a	85 b	73 de	63 c
	VALOR SX	51	WG	0.056	lb ai/a			FALL	A				
	CLASSIC	25	WG	0.0194	lb ai/a			FALL	A				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
4	VALOR XLT	40.3	WG			4	oz/a	FALL	A	98 a	93 a	78 cde	67 c
	VALOR SX	51	WG	0.075	lb ai/a			FALL	A				
	CLASSIC	25	WG	0.0258	lb ai/a			FALL	A				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
5	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	FALL	A	93 b	99 a	98 a	97 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
6	VALOR XLT	40.3	WG			1.5	oz/a	FALL	A	96 ab	99 a	98 a	97 a
	VALOR SX	51	WG	0.028	lb ai/a			FALL	A				
	CLASSIC	25	WG	0.0097	lb ai/a			FALL	A				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	VALOR XLT	40.3	WG			1.5	oz/a	EPP30	B				
	VALOR SX	51	WG	0.028	lb ai/a			EPP30	B				
	CLASSIC	25	WG	0.0097	lb ai/a			EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 12-FagerS-ISA-Fall
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR 3-29-12 Control Percent 0 DA-B	ERICA-HR 4-29-12 Control Percent -1 DA-C	ERICA-HR 5-31-12 Control Percent 0 DA-D	ERICA-HR 6-28-12 Control Percent 28 DA-D
7	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	FALL	A	93 b	57 c	80 b-e	65 c
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
8	VALOR XLT	40.3	WG			1.5	oz/a	FALL	A	97 a	60 c	85 bc	71 bc
	VALOR SX	51	WG	0.028	lb ai/a			FALL	A				
	CLASSIC	25	WG	0.0097	lb ai/a			FALL	A				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	VALOR XLT	40.3	WG			1.5	oz/a	PRE	C				
	VALOR SX	51	WG	0.028	lb ai/a			PRE	C				
	CLASSIC	25	WG	0.0097	lb ai/a			PRE	C				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
9	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	EPP30	B		99 a	98 a	98 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
10	VALOR XLT	40.3	WG			1.5	oz/a	EPP30	B		99 a	98 a	98 a
	VALOR SX	51	WG	0.028	lb ai/a			EPP30	B				
	CLASSIC	25	WG	0.0097	lb ai/a			EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	VALOR XLT	40.3	WG			1.5	oz/a	PRE	C				
	VALOR SX	51	WG	0.028	lb ai/a			PRE	C				
	CLASSIC	25	WG	0.0097	lb ai/a			PRE	C				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
11	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	EPP30	B		99 a	99 a	98 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
12	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	EPP30	B		99 a	99 a	98 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 12-FagerS-ISA-Fall
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR 3-29-12 Control Percent 0 DA-B	ERICA-HR 4-29-12 Control Percent -1 DA-C	ERICA-HR 5-31-12 Control Percent 0 DA-D	ERICA-HR 6-28-12 Control Percent 28 DA-D
13	VALOR XLT	40.3	WG			3	oz/a	EPP30	B		99 a	98 a	98 a
	VALOR SX	51	WG	0.056	lb ai/a			EPP30	B				
	CLASSIC	25	WG	0.0194	lb ai/a			EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
14	VALOR XLT	40.3	WG			4	oz/a	EPP30	B		99 a	99 a	98 a
	VALOR SX	51	WG	0.075	lb ai/a			EPP30	B				
	CLASSIC	25	WG	0.0258	lb ai/a			EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B				
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
15	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	C			77 cde	60 c
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
16	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	PRE	C			82 bcd	68 c
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
17	VALOR XLT	40.3	WG			3	oz/a	PRE	C			72 ef	62 c
	VALOR SX	51	WG	0.056	lb ai/a			PRE	C				
	CLASSIC	25	WG	0.0194	lb ai/a			PRE	C				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
18	VALOR XLT	40.3	WG			4	oz/a	PRE	C			79 b-e	65 c
	VALOR SX	51	WG	0.075	lb ai/a			PRE	C				
	CLASSIC	25	WG	0.0258	lb ai/a			PRE	C				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
19	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A	93 b	32 d	13 g	13 e
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
20	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B		96 a	80 b-e	67 c
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				

Southern Illinois University

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 12-FagerS-ISA-Fall
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR
	Pest Code									ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR
	Crop Code												
	Rating Date									3-29-12	4-29-12	5-31-12	6-28-12
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing												
	Trt-Eval Interval									0 DA-B	-1 DA-C	0 DA-D	28 DA-D
21	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C			73 de	67 c
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C				
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	POST	D				
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D				
	LSD (P=.05)									3.0	8.2	9.0	11.1
	Standard Deviation									1.7	4.9	5.4	6.7
	CV									1.8	5.62	6.58	8.97
	Replicate F									1.262	4.661	4.238	3.078
	Replicate Prob(F)									0.3098	0.0173	0.0214	0.0571
	Treatment F									5.966	50.392	38.809	32.013
	Treatment Prob(F)									0.0012	0.0001	0.0001	0.0001

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 12-FagerS-ISA-Fall
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 3-29-12 Control Percent 0 DA-B	AMATA-HR 4-29-12 Control Percent -1 DA-C	AMATA-HR 5-31-12 Control Percent 0 DA-D	AMATA-HR 6-28-12 Control Percent 28 DA-D	VIORA 3-29-12 Control Percent 0 DA-B
1	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	FALL	A	98 a	33 c	25 f	18 gh	99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D					
2	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	FALL	A	98 a	52 b	20 fg	12 hi	99 a
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D					
3	VALOR XLT	40.3	WG			3	oz/a	FALL	A	97 a	30 c	18 fg	13 hi	99 a
	VALOR SX	51	WG	0.056	lb ai/a			FALL	A					
	CLASSIC	25	WG	0.0194	lb ai/a			FALL	A					
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D					
4	VALOR XLT	40.3	WG			4	oz/a	FALL	A	98 a	28 c	12 g	10 hi	99 a
	VALOR SX	51	WG	0.075	lb ai/a			FALL	A					
	CLASSIC	25	WG	0.0258	lb ai/a			FALL	A					
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D					
5	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	FALL	A	95 a	95 a	66 d	48 f	97 bc
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A					
	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	EPP30	B					
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D					
6	VALOR XLT	40.3	WG			1.5	oz/a	FALL	A	96 a	97 a	52 e	32 g	98 b
	VALOR SX	51	WG	0.028	lb ai/a			FALL	A					
	CLASSIC	25	WG	0.0097	lb ai/a			FALL	A					
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A					
	VALOR XLT	40.3	WG			1.5	oz/a	EPP30	B					
	VALOR SX	51	WG	0.028	lb ai/a			EPP30	B					
	CLASSIC	25	WG	0.0097	lb ai/a			EPP30	B					
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D					

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 12-FagerS-ISA-Fall
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 3-29-12 Control Percent 0 DA-B	AMATA-HR 4-29-12 Control Percent -1 DA-C	AMATA-HR 5-31-12 Control Percent 0 DA-D	AMATA-HR 6-28-12 Control Percent 28 DA-D	VIORA 3-29-12 Control Percent 0 DA-B
7	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	FALL	A	96 a	7 ef	95 a	95 a	96 c
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A					
	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	PRE	C					
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D					
8	VALOR XLT	40.3	WG			1.5	oz/a	FALL	A	90 a	0 f	93 a	89 ab	99 a
	VALOR SX	51	WG	0.028	lb ai/a			FALL	A					
	CLASSIC	25	WG	0.0097	lb ai/a			FALL	A					
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A					
	VALOR XLT	40.3	WG			1.5	oz/a	PRE	C					
	VALOR SX	51	WG	0.028	lb ai/a			PRE	C					
	CLASSIC	25	WG	0.0097	lb ai/a			PRE	C					
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D					
9	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	EPP30	B		93 a	94 a	94 a	
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B					
	AUTHORITY XL	70	WG	0.0875	lb ai/a	2	oz/a	PRE	C					
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D					
10	VALOR XLT	40.3	WG			1.5	oz/a	EPP30	B		96 a	89 ab	88 ab	
	VALOR SX	51	WG	0.028	lb ai/a			EPP30	B					
	CLASSIC	25	WG	0.0097	lb ai/a			EPP30	B					
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B					
	VALOR XLT	40.3	WG			1.5	oz/a	PRE	C					
	VALOR SX	51	WG	0.028	lb ai/a			PRE	C					
	CLASSIC	25	WG	0.0097	lb ai/a			PRE	C					
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D					
11	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	EPP30	B		99 a	80 bc	73 cd	
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D					
12	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	EPP30	B		99 a	90 ab	91 ab	
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D					

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 12-FagerS-ISA-Fall
Location: Murphysboro, IL
Investigator: Bryan Young

Pest Code								AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR	VIORA
Crop Code												
Rating Date								3-29-12	4-29-12	5-31-12	6-28-12	3-29-12
Rating Type								Control	Control	Control	Control	Control
Rating Unit								Percent	Percent	Percent	Percent	Percent
Rating Timing												
Trt-Eval Interval								0 DA-B	-1 DA-C	0 DA-D	28 DA-D	0 DA-B
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
13	VALOR XLT	40.3	WG			3	oz/a	EPP30	B		99 a	63 d	50 ef	
	VALOR SX	51	WG	0.056	lb ai/a			EPP30	B					
	CLASSIC	25	WG	0.0194	lb ai/a			EPP30	B					
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D					
14	VALOR XLT	40.3	WG			4	oz/a	EPP30	B		97 a	71 cd	63 de	
	VALOR SX	51	WG	0.075	lb ai/a			EPP30	B					
	CLASSIC	25	WG	0.0258	lb ai/a			EPP30	B					
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B					
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D					
15	AUTHORITY XL	70	WG	0.175	lb ai/a	4	oz/a	PRE	C			94 a	91 ab	
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D					
16	AUTHORITY XL	70	WG	0.35	lb ai/a	8	oz/a	PRE	C			94 a	94 a	
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D					
17	VALOR XLT	40.3	WG			3	oz/a	PRE	C			93 a	86 abc	
	VALOR SX	51	WG	0.056	lb ai/a			PRE	C					
	CLASSIC	25	WG	0.0194	lb ai/a			PRE	C					
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D					
18	VALOR XLT	40.3	WG			4	oz/a	PRE	C			92 a	88 ab	
	VALOR SX	51	WG	0.075	lb ai/a			PRE	C					
	CLASSIC	25	WG	0.0258	lb ai/a			PRE	C					
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C					
	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	POST	D					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D					
19	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	FALL	A	95 a	13 de	0 h	13 hi	99 a
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	FALL	A					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	FALL	A					
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	POST	D					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D					
20	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	EPP30	B		18 d	0 h	0 i	
	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	EPP30	B					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	EPP30	B					
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	POST	D					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D					

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 12-FagerS-ISA-Fall
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR	VIORA
Pest Code										AMATA-HR	AMATA-HR	AMATA-HR	AMATA-HR	VIORA
Crop Code														
Rating Date										3-29-12	4-29-12	5-31-12	6-28-12	3-29-12
Rating Type										Control	Control	Control	Control	Control
Rating Unit										Percent	Percent	Percent	Percent	Percent
Rating Timing														
Trt-Eval Interval										0 DA-B	-1 DA-C	0 DA-D	28 DA-D	0 DA-B
21	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	PRE	C			72 cd	78 bc	
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	PRE	C					
	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	POST	D					
	N-PAK AMS	100	SL	2.5	% v/v	2.5	% v/v	POST	D					
LSD (P=.05)										5.1	9.8	10.4	14.2	0.9
Standard Deviation										3.0	5.9	6.3	8.6	0.5
CV										3.09	9.79	10.05	14.73	0.54
Replicate F										4.063	5.334	0.436	1.048	1.600
Replicate Prob(F)										0.0374	0.0104	0.6496	0.3601	0.2326
Treatment F										2.375	139.745	92.815	49.781	12.000
Treatment Prob(F)										0.0670	0.0001	0.0001	0.0001	0.0001

Southern Illinois University

Timing of Fall-Applied Residual Herbicides for Weed Control in No-Till Soybean.

Trial ID: 12-FagerS-ISA-Fall
Location: Murphysboro, IL
Investigator: Bryan Young

Trial Comments

1. Protocol: ISA (Univ of IL).
2. Ratings: CI at 0 and 28 DA-D. WC at B, C, and D timings for all treated plots; WC 28 DA-D.
3. Yield?
4. For the FALL (A) timing; Roundup Powermax, 2, 4-D LV4, and AMS could be a blanket of entire study area, all plots 10 ft wide.
5. For the PRE (C) timing; Consider Gramoxone 2 SL as a replacement for Roundup Powermax if Marestail is present.
6. ERICA-HR = Herbicide-resistant marestail (glyphosate).
   AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
7. Harvested 10-16-12, (2) 30 inch rows by 27 ft.

Southern Illinois University

Adjuvant Evaluation for Burndown.

Trial ID: 12-FagerS-UnitedSuppliers
Location: Murphysboro, IL

Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-26-12

Trial Location

City: Murphysboro
State/Prov.: IL
Postal Code: 62966
Country: USA

Objectives:
Determine if a new formulation of NIS increases the speed
of weed control and total weed control in burndown.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: NONE - Non-crop

Pest Description

Pest 1 Type: W **Code:** ERICA - Conyza canadensis (L.) Crong.
Common Name: horseweed
Description: glyphosate-resistant marestail

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% OM: 1.87 **Texture:** SIL SILT LOAM
pH: 5.5 **Soil Name:** ALVIN
CEC: 7.06

Additional Measured Elements

Element	Quantity	Unit
P1	172	LB/A
K	446	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

Adjuvant Evaluation for Burndown.

Trial ID: 12-FagerS-UnitedSuppliers
Location: Murphysboro, IL

Investigator: Bryan Young

Application Description

	A
Application Date:	4-26-12
Time of Day:	18:45
Application Method:	Spray
Application Timing:	6-10"MT
Application Placement:	BROFOL
Applied By:	RFK
Air Temperature, Unit:	75 F
% Relative Humidity:	68
Wind Velocity, Unit:	1 MPH
Wind Direction:	N
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	73 F
Soil Moisture:	NORMAL
% Cloud Cover:	85
Next Rain Occurred On:	4-30-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	NONE
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	ERICA W DESC
Stage Majority, Percent:	35
Stage Minimum, Percent:	6
Stage Maximum, Percent:	50+
Height, Unit:	8 IN
Height Minimum, Maximum:	1 14
Density, Unit:	5 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

Adjuvant Evaluation for Burndown.

Trial ID: 12-FagerS-UnitedSuppliers
Location: Murphysboro, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR	ERICA-HR	ERICA-HR
	Pest Code									ERICA-HR	ERICA-HR	ERICA-HR
	Crop Code											
	Rating Date									4-29-12	5-3-12	5-10-12
	Rating Type									Control	Control	Control
	Rating Unit									Percent	Percent	Percent
	Rating Timing											
	Trt-Eval Interval									3 DA-A	7 DA-A	14 DA-A
1	NONTREATED									0 d	0 d	0 c
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-10"MT	A	12 c	29 c	36 b
	AMSOL	100	SL	2.5	% v/v	2.5	% v/v	6-10"MT	A			
3	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-10"MT	A	30 b	58 b	76 a
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	6-10"MT	A			
	AMSOL	100	SL	2.5	% v/v	2.5	% v/v	6-10"MT	A			
4	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-10"MT	A	13 c	27 c	33 b
	CHEMSURF 80	100	SL	0.25	% v/v	0.25	% v/v	6-10"MT	A			
	AMSOL	100	SL	2.5	% v/v	2.5	% v/v	6-10"MT	A			
5	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-10"MT	A	30 b	60 ab	77 a
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	6-10"MT	A			
	CHEMSURF 80	100	SL	0.25	% v/v	0.25	% v/v	6-10"MT	A			
	AMSOL	100	SL	2.5	% v/v	2.5	% v/v	6-10"MT	A			
6	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-10"MT	A	13 c	28 c	35 b
	CHEMSURF 80 EXTRA	100	SL	0.25	% v/v	0.25	% v/v	6-10"MT	A			
	AMSOL	100	SL	2.5	% v/v	2.5	% v/v	6-10"MT	A			
7	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-10"MT	A	35 a	60 ab	75 a
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	6-10"MT	A			
	CHEMSURF 80 EXTRA	100	SL	0.25	% v/v	0.25	% v/v	6-10"MT	A			
	AMSOL	100	SL	2.5	% v/v	2.5	% v/v	6-10"MT	A			
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-10"MT	A	32 ab	60 ab	75 a
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	6-10"MT	A			
	WETCIT	100	SL	0.25	% v/v	0.25	% v/v	6-10"MT	A			
	AMSOL	100	SL	2.5	% v/v	2.5	% v/v	6-10"MT	A			
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-10"MT	A	33 ab	62 a	76 a
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	6-10"MT	A			
	USIEX2442012	100	SL	0.25	% v/v	0.25	% v/v	6-10"MT	A			
	AMSOL	100	SL	2.5	% v/v	2.5	% v/v	6-10"MT	A			
10	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-10"MT	A	32 ab	61 ab	74 a
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	6-10"MT	A			
	USIEX2652012	100	SL	0.25	% v/v	0.25	% v/v	6-10"MT	A			
	AMSOL	100	SL	2.5	% v/v	2.5	% v/v	6-10"MT	A			
11	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	6-10"MT	A	30 b	60 ab	74 a
	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	6-10"MT	A			
	USIEX2882012	100	SL	0.25	% v/v	0.25	% v/v	6-10"MT	A			
	AMSOL	100	SL	2.5	% v/v	2.5	% v/v	6-10"MT	A			
	LSD (P=.05)									3.5	2.7	4.0
	Standard Deviation									2.1	1.6	2.3
	CV									8.79	3.49	4.06
	Replicate F									1.579	0.365	0.908
	Replicate Prob(F)									0.2308	0.6986	0.4193
	Treatment F									96.421	524.099	392.235
	Treatment Prob(F)									0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Adjuvant Evaluation for Burndown.

Trial ID: 12-FagerS-UnitedSuppliers
Location: Murphysboro, IL

Investigator: Bryan Young

Trial Comments

1. Protocol: United Suppliers.
2. WC at 3, 7, and 14 DAT.
3. ERICA-HR = Herbicide-resistant marestail (glyphosate).
4. Not harvested, non-crop.

Southern Illinois University

Evaluation of Fire-Zone and HM9754 in Fall Burndown.

Trial ID: 12-YRC-Helena-fall
Location: Young Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 11-23-11

Trial Location

City: Murphysboro
State/Prov.: IL
Postal Code: 62966
Country: USA

Objectives:
To evaluate Fire-Zone in fall herbicide programs
with and without stalk decomposition.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: NONE - Non-crop

Pest Description

Pest 1 Type: W **Code:** ERICA - Conyza canadensis (L.) Crong.
Common Name: horseweed
Description: glyphosate-resistant marestail

Pest 2 Type: W **Code:** LAMAM - Lamium amplexicaule L.
Common Name: henbit

Pest 3 Type: W **Code:** STEME - Stellaria media (L.) Vill.
Common Name: chickweed, common

Pest 4 Type: W **Code:** GERCA - Geranium carolinianum L.
Common Name: geranium, Carolina

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 27 LB/A, P2O5 69 LB/A, K2O 90 LB/A

Soil Description

% OM: 1.82 **Texture:** SIL SILT LOAM
pH: 6.2 **Soil Name:** ALVIN
CEC: 6.16

Additional Measured Elements

Element	Quantity	Unit
P1	154	LB/A
K	264	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

Evaluation of Fire-Zone and HM9754 in Fall Burndown.

Trial ID: 12-YRC-Helena-fall
Location: Young Res. Center

Investigator: Bryan Young

Application Description

	A
Application Date:	11-23-11
Time of Day:	14:30
Application Method:	Spray
Application Timing:	FALL
Application Placement:	BROFOL
Applied By:	JRK
Air Temperature, Unit:	52 F
% Relative Humidity:	74
Wind Velocity, Unit:	2 MPH
Wind Direction:	E
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	51 F
Soil Moisture:	ABONOR
% Cloud Cover:	100
Next Rain Occurred On:	11-26-11

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	NONE
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A	
Pest 1 Code, Type, Scale:	ERICA	W DESC
Stage Majority, Percent:	6	
Stage Minimum, Percent:	4	
Stage Maximum, Percent:	14	
Height, Unit:	0.5	IN
Height Minimum, Maximum:	0.5	1.5
Density, Unit:	0.5	FT2
Pest 2 Code, Type, Scale:	LAMAM	W DESC
Stage Majority, Percent:	4	
Stage Minimum, Percent:	2	
Stage Maximum, Percent:	8	
Height, Unit:	2	IN
Height Minimum, Maximum:	1	3
Density, Unit:	0.1	FT2
Pest 3 Code, Type, Scale:	STEME	W DESC
Stage Majority, Percent:	4	
Stage Minimum, Percent:	2	
Stage Maximum, Percent:	6	
Height, Unit:	1	IN
Height Minimum, Maximum:	0.5	1
Density, Unit:	0.1	FT2
Pest 4 Code, Type, Scale:	GERCA	W DESC
Stage Majority, Percent:	4	
Stage Minimum, Percent:	2	
Stage Maximum, Percent:	6	
Height, Unit:	2	IN
Height Minimum, Maximum:	1	3
Density, Unit:	0.3	FT2

Southern Illinois University

Evaluation of Fire-Zone and HM9754 in Fall Burndown.

Trial ID: 12-YRC-Helena-fall
Location: Young Res. Center

Investigator: Bryan Young

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	TT
Nozzle Size:	110015
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	12 GPA

Evaluation of Fire-Zone and HM9754 in Fall Burndown.

Trial ID: 12-YRC-Helena-fall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code					
Pest Code											ERICA-HR	ERICA-HR	ERICA-HR	ERICA-HR
Crop Code										ZEAMD				
Rating Date										4-26-12	11-30-11	12-14-11	4-1-12	5-1-12
Rating Type										Residue	Control	Control	Control	Control
Rating Unit										g/1.0 m2	Percent	Percent	Percent	Percent
Rating Timing														
Trt-Eval Interval										155 DA-A	7 DA-A	21 DA-A	130 DA-A	160 DA-A
1	NONTREATED									409 a	0 b	0 b	0 b	0 c
2	CANOPY EX	29.5	WG	0.034	lb ai/a	1.85	oz/a	FALL	A	398 a	5 a	10 a	95 a	86 ab
	PREMIUM MSO	100	SL	1.0	% v/v	1	% v/v	FALL	A					
3	CANOPY EX	29.5	WG	0.034	lb ai/a	1.85	oz/a	FALL	A	393 a	5 a	10 a	95 a	84 b
	FIRE-ZONE	100	SL	1.0	% v/v	1	% v/v	FALL	A					
4	CANOPY EX	29.5	WG	0.034	lb ai/a	1.85	oz/a	FALL	A	368 a	6 a	10 a	97 a	90 a
	PREMIUM MSO	100	SL	1.0	% v/v	1	% v/v	FALL	A					
	HM9754	100	SL	1.0	gal/a	1	gal/a	FALL	A					
	28% UAN	100	SL	4.0	gal/a	4	gal/a	FALL	A					
5	CANOPY EX	29.5	WG	0.034	lb ai/a	1.85	oz/a	FALL	A	391 a	5 a	10 a	94 a	89 ab
	FIRE-ZONE	100	SL	1.0	% v/v	1	% v/v	FALL	A					
	HM9754	100	SL	1.0	gal/a	1	gal/a	FALL	A					
	28% UAN	100	SL	4.0	gal/a	4	gal/a	FALL	A					
LSD (P=.05)										109.4	1.7	0.0	3.9	5.5
Standard Deviation										71.0	1.1	0.0	2.5	3.6
CV										18.14	26.31	0.0	3.34	5.13
Replicate F										1.697	1.000	0.000	1.187	4.267
Replicate Prob(F)										0.2205	0.4262	1.0000	0.3559	0.0288
Treatment F										0.181	19.000	0.000	1121.315	477.156
Treatment Prob(F)										0.9441	0.0001	1.0000	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Evaluation of Fire-Zone and HM9754 in Fall Burndown.

Trial ID: 12-YRC-Helena-fall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	LAMAM 11-30-11 Control Percent 7 DA-A	LAMAM 12-14-11 Control Percent 21 DA-A	LAMAM 4-1-12 Control Percent 130 DA-A	LAMAM 5-1-12 Control Percent 160 DA-A	STEME 11-30-11 Control Percent 7 DA-A	STEME 12-14-11 Control Percent 21 DA-A	STEME 4-1-12 Control Percent 130 DA-A
1	NONTREATED									0 c	0 b	0 b	0 c	0 b	0 b	0 b
2	CANOPY EX	29.5	WG	0.034	lb ai/a	1.85	oz/a	FALL	A	5 b	16 a	94 a	96 ab	5 a	13 a	99 a
	PREMIUM MSO	100	SL	1.0	% v/v	1	% v/v	FALL	A							
3	CANOPY EX	29.5	WG	0.034	lb ai/a	1.85	oz/a	FALL	A	8 ab	13 a	93 a	96 b	6 a	10 a	99 a
	FIRE-ZONE	100	SL	1.0	% v/v	1	% v/v	FALL	A							
4	CANOPY EX	29.5	WG	0.034	lb ai/a	1.85	oz/a	FALL	A	9 a	16 a	95 a	97 a	5 a	10 a	99 a
	PREMIUM MSO	100	SL	1.0	% v/v	1	% v/v	FALL	A							
	HM9754	100	SL	1.0	gal/a	1	gal/a	FALL	A							
	28% UAN	100	SL	4.0	gal/a	4	gal/a	FALL	A							
5	CANOPY EX	29.5	WG	0.034	lb ai/a	1.85	oz/a	FALL	A	8 ab	14 a	94 a	97 ab	6 a	10 a	99 a
	FIRE-ZONE	100	SL	1.0	% v/v	1	% v/v	FALL	A							
	HM9754	100	SL	1.0	gal/a	1	gal/a	FALL	A							
	28% UAN	100	SL	4.0	gal/a	4	gal/a	FALL	A							
LSD (P=.05)										3.6	4.6	3.4	1.1	2.5	3.7	0.0
Standard Deviation										2.3	3.0	2.2	0.7	1.6	2.4	0.0
CV										40.48	25.47	2.96	0.92	36.57	28.41	0.0
Replicate F										0.231	2.744	0.448	2.667	0.615	0.286	0.000
Replicate Prob(F)										0.8732	0.0893	0.7231	0.0951	0.6181	0.8348	1.0000
Treatment F										9.000	20.442	1429.116	14825.001	9.923	16.286	0.000
Treatment Prob(F)										0.0013	0.0001	0.0001	0.0001	0.0009	0.0001	1.0000

Evaluation of Fire-Zone and HM9754 in Fall Burndown.

Trial ID: 12-YRC-Helena-fall
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GERCA	GERCA	GERCA	GERCA
	Pest Code									GERCA	GERCA	GERCA	GERCA
	Crop Code												
	Rating Date									11-30-11	12-14-11	4-1-12	5-1-12
	Rating Type									Control	Control	Control	Control
	Rating Unit									Percent	Percent	Percent	Percent
	Rating Timing												
	Trt-Eval Interval									7 DA-A	21 DA-A	130 DA-A	160 DA-A
1	NONTREATED									0 a	0 a	0 c	0 c
2	CANOPY EX	29.5	WG	0.034	lb ai/a	1.85	oz/a	FALL	A	0 a	4 a	61 b	30 b
	PREMIUM MSO	100	SL	1.0	% v/v	1	% v/v	FALL	A				
3	CANOPY EX	29.5	WG	0.034	lb ai/a	1.85	oz/a	FALL	A	0 a	4 a	68 ab	31 ab
	FIRE-ZONE	100	SL	1.0	% v/v	1	% v/v	FALL	A				
4	CANOPY EX	29.5	WG	0.034	lb ai/a	1.85	oz/a	FALL	A	0 a	4 a	66 ab	29 b
	PREMIUM MSO	100	SL	1.0	% v/v	1	% v/v	FALL	A				
	HM9754	100	SL	1.0	gal/a	1	gal/a	FALL	A				
	28% UAN	100	SL	4.0	gal/a	4	gal/a	FALL	A				
5	CANOPY EX	29.5	WG	0.034	lb ai/a	1.85	oz/a	FALL	A	0 a	4 a	70 a	46 a
	FIRE-ZONE	100	SL	1.0	% v/v	1	% v/v	FALL	A				
	HM9754	100	SL	1.0	gal/a	1	gal/a	FALL	A				
	28% UAN	100	SL	4.0	gal/a	4	gal/a	FALL	A				
	LSD (P=.05)									0.0	3.9	8.2	15.0
	Standard Deviation									0.0	2.5	5.3	9.8
	CV									0.0	83.33	10.08	35.81
	Replicate F									0.000	2.667	3.153	1.974
	Replicate Prob(F)									1.0000	0.0951	0.0646	0.1718
	Treatment F									0.000	1.800	124.445	11.862
	Treatment Prob(F)									1.0000	0.1937	0.0001	0.0004

Southern Illinois University

Evaluation of Fire-Zone and HM9754 in Fall Burndown.

Trial ID: 12-YRC-Helena-fall
Location: Young Res. Center

Investigator: Bryan Young

Trial Comments

1. Protocol: Helena.
2. Ratings: WC at 5-7 and 21 DAT; WC on April 1 and May 1.
3. Note any differences in stalk decomposition in comments at each evaluation.
4. There were no observable difference in stalk decomposition at any time.
5. g/1.0 m2 = grams per square meter.
   ERICA-HR = Herbicide-resistant marestail (glyphosate).
6. Not harvested, non-crop.

Southern Illinois University

Nozzle by Adjuvant Interaction - Glyphosate plus Dicamba Burndown.

Trial ID: 12-YRC-PrecLabsBD
Location: Young Res. Center
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F one-year/final
Initiation Date: 4-19-12

Trial Location

City: Murphysboro
State/Prov.: IL
Postal Code: 62966
Country: USA

Objectives:
Determine the influence and interaction of nozzle type
and adjuvant on efficacy of glyphosate plus dicamba for burndown.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: NONE - Non-crop

Pest Description

Pest 1 Type: W **Code:** ERICA - Conyza canadensis (L.) Crong.
Common Name: horseweed
Description: glyphosate-resistant marestail

Pest 2 Type: W **Code:** VERPG - Veronica peregrina L.
Common Name: speedwell, purslane

Pest 3 Type: W **Code:** CHEAL - Chenopodium album L.
Common Name: lambsquarters, common

Pest 4 Type: W **Code:** AMBTR - Ambrosia trifida L.
Common Name: ragweed, giant

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 40 FT
Plot Area, Unit: 400 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	ZEAMD	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 27 LB/A, P2O5 69 LB/A, K2O 90 LB/A

Soil Description

% OM: 1.82 **Texture:** SIL SILT LOAM
pH: 6.2 **Soil Name:** ALVIN
CEC: 6.16

Additional Measured Elements

Element	Quantity	Unit
P1	154	LB/A
K	264	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 3.5 MI

Nozzle by Adjuvant Interaction - Glyphosate plus Dicamba Burndown.

Trial ID: 12-YRC-PrecLabsBD
Location: Young Res. Center
Investigator: Bryan Young

Application Description

	A
Application Date:	4-19-12
Time of Day:	15:15
Application Method:	Spray
Application Timing:	BURNDN
Application Placement:	BROFOL
Applied By:	JRK
Air Temperature, Unit:	78 F
% Relative Humidity:	28
Wind Velocity, Unit:	4 MPH
Wind Direction:	SSE
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	63 F
Soil Moisture:	NORMAL
% Cloud Cover:	5
Next Rain Occurred On:	4-20-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	NONE
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A	
Pest 1 Code, Type, Scale:	ERICA	W DESC
Stage Majority, Percent:	20	
Stage Minimum, Percent:	4	
Stage Maximum, Percent:	40	
Height, Unit:	4	IN
Height Minimum, Maximum:	2	8
Density, Unit:	1	FT2
Pest 2 Code, Type, Scale:	VERPG	W DESC
Stage Majority, Percent:	50+	
Stage Minimum, Percent:	30	
Stage Maximum, Percent:	50	
Height, Unit:	9	IN
Height Minimum, Maximum:	8	10
Density, Unit:	20	FT2
Pest 3 Code, Type, Scale:	CHEAL	W DESC
Stage Majority, Percent:	40	
Stage Minimum, Percent:	8	
Stage Maximum, Percent:	70+	
Height, Unit:	9	IN
Height Minimum, Maximum:	4.5	16
Density, Unit:	2	FT2
Pest 4 Code, Type, Scale:	AMBTR	W DESC
Stage Majority, Percent:	6	
Stage Minimum, Percent:	2	
Stage Maximum, Percent:	9	
Height, Unit:	5.5	IN
Height Minimum, Maximum:	1	16
Density, Unit:	0.3	FT2

Nozzle by Adjuvant Interaction - Glyphosate plus Dicamba Burndown.

Trial ID: 12-YRC-PrecLabsBD
Location: Young Res. Center
Investigator: Bryan Young

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	ALTEVE
Operation Pressure, Unit:	40 PSI
Nozzle Type:	See
Nozzle Size:	comment
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	10 GPA

Nozzle by Adjuvant Interaction - Glyphosate plus Dicamba Burndown.

Trial ID: 12-YRC-PrecLabsBD
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR 5-3-12 Control Percent 14 DA-A	ERICA-HR 5-17-12 Control Percent 28 DA-A	VERAR 5-3-12 Control Percent 14 DA-A	CHEAL 5-3-12 Control Percent 14 DA-A	CHEAL 5-17-12 Control Percent 28 DA-A	AMBTR 5-3-12 Control Percent 14 DA-A	AMBTR 5-17-12 Control Percent 28 DA-A
1	TT 11004 at 40 PSI									75 abc	98 abc	83 def	92 a	96 a	73 b-e	96 a
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 337	100	SL	1.25	% v/v	1.25	% v/v	BURNDN	A							
2	AIXR 11004 at 40 PSI									76 ab	99 ab	87 bcd	94 a	97 a	71 e	97 a
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 337	100	SL	1.25	% v/v	1.25	% v/v	BURNDN	A							
3	XR 11004 at 40 PSI									73 a-f	97 abc	91 ab	95 a	98 a	72 de	98 a
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 337	100	SL	1.25	% v/v	1.25	% v/v	BURNDN	A							
4	TTI 11004 at 40 PSI									74 a-f	98 abc	87 bcd	90 a	95 a	76 abc	90 ab
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 337	100	SL	1.25	% v/v	1.25	% v/v	BURNDN	A							
5	TT 11004 at 40 PSI									73 a-f	98 abc	87 a-d	96 a	98 a	75 a-d	96 a
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 337	100	SL	2.5	% v/v	2.5	% v/v	BURNDN	A							
6	AIXR 11004 at 40 PSI									74 a-f	98 abc	87 bcd	94 a	98 a	78 a	97 a
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 337	100	SL	2.5	% v/v	2.5	% v/v	BURNDN	A							
7	XR 11004 at 40 PSI									73 b-f	96 abc	87 bcd	96 a	98 a	75 a-d	98 a
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 337	100	SL	2.5	% v/v	2.5	% v/v	BURNDN	A							
8	TTI 11004 at 40 PSI									74 a-f	99 a	80 f	92 a	96 a	77 ab	96 a
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 337	100	SL	2.5	% v/v	2.5	% v/v	BURNDN	A							
9	TT 11004 at 40 PSI									73 b-f	97 abc	85 cde	96 a	98 a	78 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PX 21D42	100	SL	0.125	% v/v	0.125	% v/v	BURNDN	A							
	AMS	100	SG	1.0	% w/w	1	% w/w	BURNDN	A							
10	AIXR 11004 at 40 PSI									77 a	98 abc	90 ab	95 a	98 a	73 cde	99 a
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PX 21D42	100	SL	0.125	% v/v	0.125	% v/v	BURNDN	A							
	AMS	100	SG	1.0	% w/w	1	% w/w	BURNDN	A							
11	XR 11004 at 40 PSI									74 a-e	97 abc	89 abc	88 a	82 b	75 a-d	95 a
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PX 21D42	100	SL	0.125	% v/v	0.125	% v/v	BURNDN	A							
	AMS	100	SG	1.0	% w/w	1	% w/w	BURNDN	A							

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Nozzle by Adjuvant Interaction - Glyphosate plus Dicamba Burndown.

Trial ID: 12-YRC-PrecLabsBD
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR 5-3-12 Control Percent 14 DA-A	ERICA-HR 5-17-12 Control Percent 28 DA-A	VERAR 5-3-12 Control Percent 14 DA-A	CHEAL 5-3-12 Control Percent 14 DA-A	CHEAL 5-17-12 Control Percent 28 DA-A	AMBTR 5-3-12 Control Percent 14 DA-A	AMBTR 5-17-12 Control Percent 28 DA-A
12	TTI 11004 at 40 PSI									72 c-f	98 abc	86 b-e	95 a	98 a	73 cde	91 ab
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PX 21D42	100	SL	0.125	% v/v	0.125	% v/v	BURNDN	A							
	AMS	100	SG	1.0	% w/w	1	% w/w	BURNDN	A							
13	TT 11004 at 40 PSI									42 h	63 e	83 def	95 a	97 a	60 g	99 a
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 336	100	SL	1.25	% v/v	1.25	% v/v	BURNDN	A							
14	AIXR 11004 at 40 PSI									47 g	63 e	82 ef	90 a	94 a	63 g	66 c
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 336	100	SL	1.25	% v/v	1.25	% v/v	BURNDN	A							
15	XR 11004 at 40 PSI									43 gh	61 e	87 bcd	89 a	94 a	67 f	72 c
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 336	100	SL	1.25	% v/v	1.25	% v/v	BURNDN	A							
16	TTI 11004 at 40 PSI									43 gh	61 e	83 def	93 a	99 a	60 g	82 b
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 336	100	SL	1.25	% v/v	1.25	% v/v	BURNDN	A							
17	TT 11004 at 40 PSI									75 a-d	98 abc	90 ab	95 a	98 a	77 ab	99 a
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 331	100	SL	2.5	% v/v	2.5	% v/v	BURNDN	A							
18	AIXR 11004 at 40 PSI									71 def	96 abc	87 bcd	94 a	98 a	75 a-d	99 a
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 331	100	SL	2.5	% v/v	2.5	% v/v	BURNDN	A							
19	XR 11004 at 40 PSI									70 f	91 d	83 def	94 a	98 a	76 abc	95 a
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 331	100	SL	2.5	% v/v	2.5	% v/v	BURNDN	A							
20	TTI 11004 at 40 PSI									72 c-f	96 abc	80 f	93 a	98 a	78 a	99 a
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 331	100	SL	2.5	% v/v	2.5	% v/v	BURNDN	A							
21	TT 11004 at 40 PSI									71 def	99 a	92 a	95 a	99 a	75 a-d	99 a
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 675	100	SL	0.25	% v/v	0.25	% v/v	BURNDN	A							
	AMS	100	SG	1.0	% w/w	1	% w/w	BURNDN	A							
22	AIXR 11004 at 40 PSI									71 def	96 abc	88 a-d	97 a	99 a	77 ab	99 a
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 675	100	SL	0.25	% v/v	0.25	% v/v	BURNDN	A							
	AMS	100	SG	1.0	% w/w	1	% w/w	BURNDN	A							
23	XR 11004 at 40 PSI									74 a-f	96 abc	85 cde	95 a	98 a	77 ab	98 a
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 675	100	SL	0.25	% v/v	0.25	% v/v	BURNDN	A							
	AMS	100	SG	1.0	% w/w	1	% w/w	BURNDN	A							

Nozzle by Adjuvant Interaction - Glyphosate plus Dicamba Burndown.

Trial ID: 12-YRC-PrecLabsBD
Location: Young Res. Center
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	ERICA-HR 5-3-12 Control Percent 14 DA-A	ERICA-HR 5-17-12 Control Percent 28 DA-A	VERAR 5-3-12 Control Percent 14 DA-A	CHEAL 5-3-12 Control Percent 14 DA-A	CHEAL 5-17-12 Control Percent 28 DA-A	AMBTR 5-3-12 Control Percent 14 DA-A	AMBTR 5-17-12 Control Percent 28 DA-A
24	TTI 11004 at 40 PSI									73 b-f	99 ab	82 ef	96 a	98 a	77 ab	99 a
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 675	100	SL	0.25	% v/v	0.25	% v/v	BURNDN	A							
	AMS	100	SG	1.0	% w/w	1	% w/w	BURNDN	A							
25	TT 11004 at 40 PSI									73 a-f	98 abc	87 a-d	94 a	98 a	76 abc	98 a
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 747	100	SL	0.25	% v/v	0.25	% v/v	BURNDN	A							
	AMS	100	SG	1.0	% w/w	1	% w/w	BURNDN	A							
26	AIXR 11004 at 40 PSI									71 ef	99 a	85 cde	95 a	98 a	77 ab	99 a
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 747	100	SL	0.25	% v/v	0.25	% v/v	BURNDN	A							
	AMS	100	SG	1.0	% w/w	1	% w/w	BURNDN	A							
27	XR 11004 at 40 PSI									72 c-f	95 bc	85 cde	96 a	99 a	73 cde	95 a
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 747	100	SL	0.25	% v/v	0.25	% v/v	BURNDN	A							
	AMS	100	SG	1.0	% w/w	1	% w/w	BURNDN	A							
28	TTI 11004 at 40 PSI									73 a-f	95 c	85 cde	92 a	96 a	76 abc	99 a
	ROUNDUP POWERMAX	4.5	SL	1.0	lb ae/a	28.4	fl oz/a	BURNDN	A							
	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	BURNDN	A							
	PL 747	100	SL	0.25	% v/v	0.25	% v/v	BURNDN	A							
	AMS	100	SG	1.0	% w/w	1	% w/w	BURNDN	A							
LSD (P=.05)										3.9	3.5	4.8	5.4	6.6	3.9	9.5
Standard Deviation										2.4	2.1	3.0	3.3	4.1	2.3	5.7
CV										3.5	2.31	3.45	3.55	4.18	3.16	6.03
Replicate F										1.500	6.969	4.190	0.697	3.697	0.282	0.828
Replicate Prob(F)										0.2324	0.0021	0.0205	0.5028	0.0314	0.7562	0.4457
Treatment F										57.614	105.934	3.084	1.515	1.891	14.361	6.110
Treatment Prob(F)										0.0001	0.0001	0.0002	0.0977	0.0238	0.0001	0.0001

Southern Illinois University

Nozzle by Adjuvant Interaction - Glyphosate plus Dicamba Burndown.

Trial ID: 12-YRC-PrecLabsBD
Location: Young Res. Center
Investigator: Bryan Young

Trial Comments

1. Protocol: Precision Labs (Burndown).
2. WC at 14 and 28 DAT.
3. Nozzle size and type are per treatment, see treatment list. All applications are at 12 MPH.
4. ERICA-HR = Herbicide-resistant marestail (glyphosate).
5. Not harvested, non-crop.

Fomesafen Nozzle by Adjuvant Study - Winfield Solutions.

Trial ID: 12-DSO-FomeATV
Location: De Soto, IL
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 4-29-12

Trial Location

City: De Soto
State/Prov.: IL
Postal Code: 62924
Country: USA

Objectives:
Evaluate the effect of Interlock and spray nozzles on the efficacy of waterhemp control with fomesafen.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: AG3832 **Description:** RR2Y
BBCH Scale: BSOY **Planting Date:** 4-29-12
Planting Method: SEEDED Seeded **Rate, Unit:** 155000 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMATA - Amaranthus rudis Sauer
Common Name: waterhemp, common
Description: glyphosate-resistant waterhemp

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 40 FT
Plot Area, Unit: 400 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 27 LB/A, P2O5 69 LB/A, K2O 90 LB/A

Soil Description

% Sand: 15.4 **% OM:** 2.15 **Texture:** SIL SILT LOAM
% Silt: 64.7 **pH:** 6.9 **Soil Name:** OKAW
% Clay: 19.9 **CEC:** 12.4

Additional Measured Elements

Element	Quantity	Unit
P1	94	LB/A
K	468	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: SOUTHERN IL AIRPORT (93810) **Distance, Unit:** 1.5 MI

Fomesafen Nozzle by Adjuvant Study - Winfield Solutions.

Trial ID: 12-DSO-FomeATV
Location: De Soto, IL
Investigator: Bryan Young

Application Description

	A
Application Date:	6-15-12
Time of Day:	16:00
Application Method:	Spray
Application Timing:	8-12"W
Application Placement:	BROFOL
Applied By:	JRK
Air Temperature, Unit:	92 F
% Relative Humidity:	41
Wind Velocity, Unit:	4 MPH
Wind Direction:	SE
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	85 F
Soil Moisture:	BELNOR
% Cloud Cover:	5
Next Rain Occurred On:	6-17-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	V5
Stage Minimum, Percent:	V4
Stage Maximum, Percent:	V5
Height, Unit:	14 IN
Height Minimum, Maximum:	12 14

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMATA W DESC
Stage Majority, Percent:	12
Stage Minimum, Percent:	4
Stage Maximum, Percent:	30
Height, Unit:	9 IN
Height Minimum, Maximum:	2 22
Density, Unit:	15 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	ALTEVE
Nozzle Type:	See
Nozzle Size:	comment
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	10 GPA

Fomesafen Nozzle by Adjuvant Study - Winfield Solutions.

Trial ID: 12-DSO-FomeATV
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-22-12 Injury Percent 7 DA-A	GLXMA 6-29-12 Injury Percent 14 DA-A	GLXMA 7-13-12 Injury Percent 28 DA-A
1	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH									9 e	6 ab	3 a
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	8-12"W	A			
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	8-12"W	A			
2	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH									10 de	6 ab	3 a
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	8-12"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	8-12"W	A			
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	8-12"W	A			
3	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH									9 e	6 ab	3 a
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	8-12"W	A			
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	8-12"W	A			
4	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH									9 e	5 b	3 a
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	8-12"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	8-12"W	A			
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	8-12"W	A			
5	COARSE AIXR 11004 @ 50 PSI 13.4 MPH									11 cd	6 ab	3 a
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	8-12"W	A			
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	8-12"W	A			
6	COARSE AIXR 11004 @ 50 PSI 13.4 MPH									13 bc	7 a	3 a
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	8-12"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	8-12"W	A			
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	8-12"W	A			
7	VC-XC AI 11004 @ 50 PSI 13.4 MPH									10 de	6 ab	3 a
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	8-12"W	A			
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	8-12"W	A			
8	VC-XC AI 11004 @ 50 PSI 13.4 MPH									15 a	7 a	3 a
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	8-12"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	8-12"W	A			
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	8-12"W	A			
9	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH									14 ab	7 a	3 a
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	8-12"W	A			
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	8-12"W	A			
10	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH									15 a	7 a	3 a
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	8-12"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	8-12"W	A			
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	8-12"W	A			

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Fomesafen Nozzle by Adjuvant Study - Winfield Solutions.

Trial ID: 12-DSO-FomeATV
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code			
Pest Code												
Crop Code										GLXMA	GLXMA	GLXMA
Rating Date										6-22-12	6-29-12	7-13-12
Rating Type										Injury	Injury	Injury
Rating Unit										Percent	Percent	Percent
Rating Timing												
Trt-Eval Interval										7 DA-A	14 DA-A	28 DA-A
11	NONTREATED									0 f	0 c	0 b
LSD (P=.05)										1.8	1.4	0.0
Standard Deviation										1.1	0.8	0.0
CV										10.07	14.09	0.0
Replicate F										0.108	0.577	0.000
Replicate Prob(F)										0.8981	0.5707	1.0000
Treatment F										47.232	19.087	0.000
Treatment Prob(F)										0.0001	0.0001	1.0000

Fomesafen Nozzle by Adjuvant Study - Winfield Solutions.

Trial ID: 12-DSO-FomeATV
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR 6-22-12 Control Percent 7 DA-A	AMATA-HR 6-29-12 Control Percent 14 DA-A	AMATA-HR 7-13-12 Control Percent 28 DA-A
1	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH									46 abc	51 ab	48 ab
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	8-12"W	A			
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	8-12"W	A			
2	FINE TJ60 11003 @ 43.5 PSI 9.4 MPH									38 bc	45 b	42 b
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	8-12"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	8-12"W	A			
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	8-12"W	A			
3	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH									36 c	47 b	43 ab
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	8-12"W	A			
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	8-12"W	A			
4	MEDIUM XR 11003 @ 43.5 PSI 9.4 MPH									41 bc	48 ab	48 ab
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	8-12"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	8-12"W	A			
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	8-12"W	A			
5	COARSE AIXR 11004 @ 50 PSI 13.4 MPH									38 bc	47 b	42 b
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	8-12"W	A			
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	8-12"W	A			
6	COARSE AIXR 11004 @ 50 PSI 13.4 MPH									48 ab	63 a	57 a
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	8-12"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	8-12"W	A			
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	8-12"W	A			
7	VC-XC AI 11004 @ 50 PSI 13.4 MPH									37 c	54 ab	47 ab
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	8-12"W	A			
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	8-12"W	A			
8	VC-XC AI 11004 @ 50 PSI 13.4 MPH									44 abc	63 a	50 ab
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	8-12"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	8-12"W	A			
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	8-12"W	A			
9	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH									45 abc	57 ab	52 ab
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	8-12"W	A			
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	8-12"W	A			
10	ULTRA COARSE TTI 11004 @ 43.5 PSI 12.3 MPH									53 a	58 ab	50 ab
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	8-12"W	A			
	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	8-12"W	A			
	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	8-12"W	A			

Fomesafen Nozzle by Adjuvant Study - Winfield Solutions.

Trial ID: 12-DSO-FomeATV
Location: De Soto, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMATA-HR	AMATA-HR	AMATA-HR
Pest Code										AMATA-HR	AMATA-HR	AMATA-HR
Crop Code												
Rating Date										6-22-12	6-29-12	7-13-12
Rating Type										Control	Control	Control
Rating Unit										Percent	Percent	Percent
Rating Timing												
Trt-Eval Interval										7 DA-A	14 DA-A	28 DA-A
11	NONTREATED									0 d	0 c	0 c
LSD (P=.05)										10.3	16.4	13.8
Standard Deviation										6.1	9.7	8.1
CV										15.72	19.92	18.67
Replicate F										4.346	0.788	2.391
Replicate Prob(F)										0.0271	0.4684	0.1172
Treatment F										15.592	9.694	10.379
Treatment Prob(F)										0.0001	0.0001	0.0001

Southern Illinois University

Fomesafen Nozzle by Adjuvant Study - Winfield Solutions.

Trial ID: 12-DSO-FomeATV
Location: De Soto, IL
Investigator: Bryan Young

Trial Comments

1. Protocol: Winfield Solutions.
2. Ratings: CI/WC at 7, 14 and 28 DAT.
3. Nozzle type/size, application PSI, and application speed are per treatment, see treatment list.
4. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
5. Not harvested.

Herbicide Response Screen.

Trial ID: 12-COL-Screen
Location: Collinsville, IL
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 7-6-12

Trial Location

City: Collinsville
State/Prov.: IL
Postal Code: 62234
Country: USA

Objectives:
Determine the efficacy of various herbicides on a glyphosate-resistant population of Palmer amaranth.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: NONE - Non-crop

Pest Description

Pest 1 Type: W **Code:** AMAPA - Amaranthus palmeri S.Wats.
Common Name: amaranth, Palmer
Description: glyphosate-resistant Palmer amaranth

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% Sand: 8.48 **% OM:** 2.08 **Texture:** SIL SILT LOAM
% Silt: 79.03 **pH:** 8 **Soil Name:** Littleton / Haymond / Orion
% Clay: 12.49 **CEC:** 12.61

Additional Measured Elements

Element	Quantity	Unit
P1	279	LB/A
K	410	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 15 MI

No.	Date	Amount	Unit	Type	Type Description
1.	6-11-12	0.67	IN	RAIN	rain
2.	6-16-12	0.5	IN	RAIN	rain
3.	7-6-12	1.0	IN	SPWACA	sprinkler - water cannon/traveling gun
4.	7-26-12	0.25	IN	RAIN	rain

Southern Illinois University

Herbicide Response Screen.

Trial ID: 12-COL-Screen
Location: Collinsville, IL
Investigator: Bryan Young

Application Description

	A	B
Application Date:	7-6-12	7-12-12
Time of Day:	17:00	15:00
Application Method:	Spray	Spray
Application Timing:	PRE	3-4"W
Application Placement:	BROFOL	BROFOL
Applied By:	JRK	JRK
Air Temperature, Unit:	105 F	95 F
% Relative Humidity:	38	31
Wind Velocity, Unit:	2 MPH	4 MPH
Wind Direction:	E	W
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	100 F	81 F
Soil Moisture:	BELNOR	BELNOR
% Cloud Cover:	5	5
Next Rain Occurred On:	7-6-12	7-26-12

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	NONE	NONE
Stage Scale Used:	DESC	DESC
Stage Majority, Percent:	NA	NA

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	AMAPA W DESC	AMAPA W DESC
Stage Majority, Percent:	NA	8
Stage Minimum, Percent:		4
Stage Maximum, Percent:		12
Height, Unit:		4 IN
Height Minimum, Maximum:		2 6
Density, Unit:		7 FT2

Application Equipment

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Equipment Type:	BACSPR	BACSPR
Operation Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	XR	XR
Nozzle Size:	8002	8002
Boom Length, Unit:	6.67 FT	6.67 FT
Spray Volume, Unit:	15 GPA	15 GPA

Herbicide Response Screen.

Trial ID: 12-COL-Screen
Location: Collinsville, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMAPA-HR 8-4-12 Control Percent 29 DA-A	AMAPA-HR 8-18-12 Control Percent 43 DA-A
1	NONTREATED									0 h	0 h
2	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"W	B	35 g	32 g
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"W	B		
3	ROUNDUP POWERMAX	4.5	SL	1.55	lb ae/a	44	fl oz/a	3-4"W	B	68 cd	48 ef
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"W	B		
4	ROUNDUP POWERMAX	4.5	SL	12.4	lb ae/a	352	fl oz/a	3-4"W	B	97 a	88 a
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"W	B		
5	PURSUIT	2	SL	0.0625	lb ai/a	4	fl oz/a	3-4"W	B	5 h	8 h
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"W	B		
6	AATREX	4	SC	1	lb ai/a	1	qt/a	3-4"W	B	86 ab	48 ef
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W	B		
7	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	3-4"W	B	68 cd	38 fg
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"W	B		
8	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"W	B	89 ab	62 cd
	PURSUIT	2	SL	0.0625	lb ai/a	4	fl oz/a	3-4"W	B		
	AATREX	4	SC	1	lb ai/a	1	qt/a	3-4"W	B		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"W	B		
9	ROUNDUP POWERMAX	4.5	SL	0.77	lb ae/a	22	fl oz/a	3-4"W	B	91 ab	58 de
	PURSUIT	2	SL	0.0625	lb ai/a	4	fl oz/a	3-4"W	B		
	AATREX	4	SC	1	lb ai/a	1	qt/a	3-4"W	B		
	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	3-4"W	B		
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W	B		
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"W	B		
10	2,4-D LV 4	3.8	EC	0.475	lb ae/a	1	pt/a	3-4"W	B	52 ef	71 bc
11	2,4-D LV 4	3.8	EC	0.95	lb ae/a	2	pt/a	3-4"W	B	68 cd	72 bc
12	CLARITY	4	SL	0.25	lb ae/a	8	fl oz/a	3-4"W	B	57 de	85 a
13	CLARITY	4	SL	0.5	lb ae/a	16	fl oz/a	3-4"W	B	78 bc	87 a
14	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-4"W	B	92 ab	69 bcd
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"W	B		
15	LIBERTY 280	2.34	EC	0.66	lb ai/a	36	fl oz/a	3-4"W	B	96 a	80 ab
	N-PAK AMS	100	SL	5	% v/v	5	% v/v	3-4"W	B		
16	CALLISTO	4	SC	0.094	lb ai/a	3	fl oz/a	3-4"W	B	47 efg	30 g
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W	B		
17	BALANCE PRO	4	SC	0.0625	lb ai/a	2	fl oz/a	3-4"W	B	42 fg	33 g
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W	B		
18	GRAMOXONE 2 SL	2	SL	0.625	lb ai/a	2.5	pt/a	3-4"W	B	97 a	86 a
	COC (PRIME OIL)	100	SL	1	% v/v	1	% v/v	3-4"W	B		

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Herbicide Response Screen.

Trial ID: 12-COL-Screen
Location: Collinsville, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMAPA-HR 8-4-12 Control Percent 29 DA-A	AMAPA-HR 8-18-12 Control Percent 43 DA-A
19	NONTREATED									0 h	0 h
20	AATREX	4	SC	2	lb ai/a	2	qt/a	PRE	A	91 ab	90 a
21	FLEXSTAR	1.88	EC	0.353	lb ai/a	24	fl oz/a	PRE	A		
22	PURSUIT	2	SL	0.0625	lb ai/a	4	fl oz/a	PRE	A	5 h	7 h
23	CALLISTO	4	SC	0.188	lb ai/a	6	fl oz/a	PRE	A	10 h	10 h
24	BALANCE PRO	4	SC	0.0625	lb ai/a	2	fl oz/a	PRE	A	5 h	5 h
	LSD (P=.05)									13.4	11.2
	Standard Deviation									8.1	6.8
	CV									14.65	14.04
	Replicate F									2.476	3.547
	Replicate Prob(F)									0.0957	0.0373
	Treatment F									58.743	67.508
	Treatment Prob(F)									0.0001	0.0001

Southern Illinois University

Herbicide Response Screen.

Trial ID: 12-COL-Screen
Location: Collinsville, IL
Investigator: Bryan Young

Trial Comments

1. Protocol: SIU (BGY).
2. Ratings: WC at 14 and 28 DA-B.
3. Blanket of Gramoxone at trial initiation if necessary to start weed-free.
4. AMAPA-HR = Herbicide-resistant Palmer amaranth (glyphosate).
5. Irrigation following the PRE application was 1.0 inch 4 hours later.
6. Missing data for treatment 21 was due to application problems.
7. Not harvested (non-crop).

Southern Illinois University

Preemergence Residual Herbicides for Palmer Amaranth in Soybean.

Trial ID: 12-COL-Residual
Location: Collinsville, IL
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 6-3-12

Trial Location

City: Collinsville
State/Prov.: IL
Postal Code: 62234
Country: USA

Objectives:
Determine which preemergence soybean herbicides provide the greatest residual control of Palmer amaranth.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: GLXMA Glycine max Soybean
BBCH Scale: BSOY
Planting Method: SEEDED Seeded **Rate, Unit:** 75 LB/A
Depth, Unit: 1 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** AMAPA - Amaranthus palmeri S.Wats.
Common Name: amaranth, Palmer
Description: glyphosate-resistant Palmer amaranth

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT
Plot Area, Unit: 300 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOBL Randomized Complete Block (RCB)

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% Sand: 8.48 **% OM:** 2.08 **Texture:** SIL SILT LOAM
% Silt: 79.03 **pH:** 8 **Soil Name:** Littleton / Haymond / Orion
% Clay: 12.49 **CEC:** 12.61

Additional Measured Elements

Element	Quantity	Unit
P1	279	LB/A
K	410	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 15 MI

Preemergence Residual Herbicides for Palmer Amaranth in Soybean.

Trial ID: 12-COL-Residual
Location: Collinsville, IL
Investigator: Bryan Young

No.	Date	Amount	Unit	Type	Type Description
1.	6-11-12	0.67	IN	RAIN	rain
2.	6-16-12	0.5	IN	RAIN	rain
3.	6-24-12	1.0	IN	SPWACA	sprinkler - water cannon/traveling gun
4.	7-6-12	1.0	IN	SPWACA	sprinkler - water cannon/traveling gun
5.	7-26-12	0.25	IN	RAIN	rain
6.	8-1-12	1.0	IN	SPWACA	sprinkler - water cannon/traveling gun

Application Description

	A
Application Date:	6-3-12
Time of Day:	10:00
Application Method:	Spray
Application Timing:	PRE
Application Placement:	BROFOL
Applied By:	JRK
Air Temperature, Unit:	80 F
% Relative Humidity:	57
Wind Velocity, Unit:	1 MPH
Wind Direction:	NW
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	74 F
Soil Moisture:	BELNOR
% Cloud Cover:	80
Next Rain Occurred On:	6-11-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMAPA W DESC
Stage Majority, Percent:	NA

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	BACSPR
Operation Pressure, Unit:	30 PSI
Nozzle Type:	XR
Nozzle Size:	8002
Boom Length, Unit:	10 FT
Spray Volume, Unit:	15 GPA

Preemergence Residual Herbicides for Palmer Amaranth in Soybean.

Trial ID: 12-COL-Residual
Location: Collinsville, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	GLXMA 6-24-12 Injury Percent 21 DA-A	GLXMA 7-15-12 Injury Percent 42 DA-A	AMAPA-HR 6-24-12 Control Percent 21 DA-A	AMAPA-HR 7-15-12 Control Percent 42 DA-A
1	NONTREATED									0 a	0 a	0 c	0 d
2	SONIC	70	WG	0.28	lb ai/a	6.4	oz/a	PRE	A	0 a	0 a	97 a	53 ab
3	ENVIVE	41.3	WG	0.129	lb ai/a	5	oz/a	PRE	A	0 a	0 a	97 a	37 bc
4	VALOR XLT	40.3	WG	0.101	lb ai/a	4	oz/a	PRE	A	0 a	0 a	96 a	43 abc
5	FIERCE	76	WG	0.214	lb ai/a	4.5	oz/a	PRE	A	0 a	0 a	97 a	70 a
6	ZIDUA	85	WG	0.133	lb ai/a	2.5	oz/a	PRE	A	0 a	0 a	95 a	49 ab
7	PREFIX	5.29	EC	1.65	lb ai/a	2.5	pt/a	PRE	A	0 a	0 a	95 a	60 ab
8	BOUNDARY	6.5	EC	1.22	lb ai/a	1.5	pt/a	PRE	A	0 a	0 a	94 a	40 abc
9	MATADOR	4.7	SC	1.59	lb ai/a	2.7	pt/a	PRE	A	0 a	0 a	94 a	63 ab
10	VERDICT OUTLOOK	5.57 6	EC EC	0.218 0.47	lb ai/a lb ai/a	5 10	oz/a fl oz/a	PRE PRE	A A	0 a	0 a	96 a	52 ab
11	LINEX	4	SC	1	lb ai/a	2	pt/a	PRE	A	0 a	0 a	58 b	13 cd
12	NONTREATED									0 a	0 a	0 c	0 d
LSD (P=.05)										0.0	0.0	7.6	31.6
Standard Deviation										0.0	0.0	4.5	18.7
CV										0.0	0.0	5.89	46.77
Replicate F										0.000	0.000	7.827	23.130
Replicate Prob(F)										1.0000	1.0000	0.0027	0.0001
Treatment F										0.000	0.000	205.632	4.785
Treatment Prob(F)										1.0000	1.0000	0.0001	0.0009

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Preemergence Residual Herbicides for Palmer Amaranth in Soybean.

Trial ID: 12-COL-Residual
Location: Collinsville, IL
Investigator: Bryan Young

Trial Comments

1. Protocol: SIU.
2. Ratings: CI/WC at 21, 42, and 63 DAT.
3. AMAPA-HR = Herbicide-resistant Palmer amaranth (glyphosate).
4. Rainfall following the PRE application was 0.67 inch 8 days later and 0.5 inch 13 days later.
5. Not harvested.

Application Parameters for Liberty, Does it Really Matter?

Trial ID: 12-COL-SprayDemo
Location: Collinsville, IL
Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 7-22-12

Trial Location

City: Collinsville
State/Prov.: IL
Postal Code: 62234
Country: USA

Objectives:
Demonstrate the differences in weed control efficacy of Liberty 280 herbicide
when application parameters such as nozzles or spray additives are manipulated.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: NONE - Non-crop

Pest Description

Pest 1 Type: W **Code:** AMAPA - Amaranthus palmeri S.Wats.
Common Name: amaranth, Palmer
Description: glyphosate-resistant Palmer amaranth

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 100 FT
Plot Area, Unit: 1000 FT2 **Tillage Type:** REDTIL reduced-till
Replications: 1 **Study Design:** NONRAN Non-Randomized

No.	Previous Crop	Year
1.	GLXMA	2011

Maintenance

No.	Maintenance Treatment Name
1.	N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

Soil Description

% Sand: 8.48 **% OM:** 2.08 **Texture:** SIL SILT LOAM
% Silt: 79.03 **pH:** 8 **Soil Name:** Littleton / Haymond / Orion
% Clay: 12.49 **CEC:** 12.61

Additional Measured Elements

Element	Quantity	Unit
P1	279	LB/A
K	410	LB/A

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Belleville IL **Distance, Unit:** 15 MI

No.	Date	Amount	Unit	Type	Type Description
1.	6-11-12	0.67	IN	RAIN	rain
2.	6-16-12	0.5	IN	RAIN	rain
3.	7-6-12	1.0	IN	SPWACA	sprinkler - water cannon/traveling gun
4.	7-26-12	0.25	IN	RAIN	rain

Application Parameters for Liberty, Does it Really Matter?

Trial ID: 12-COL-SprayDemo
Location: Collinsville, IL
Investigator: Bryan Young

Application Description

	A
Application Date:	7-22-12
Time of Day:	8:00
Application Method:	Spray
Application Timing:	3-6"W
Application Placement:	BROFOL
Applied By:	JRK
Air Temperature, Unit:	85 F
% Relative Humidity:	51
Wind Velocity, Unit:	0 MPH
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	82 F
Soil Moisture:	BELNOR
% Cloud Cover:	5
Next Rain Occurred On:	7-26-12

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	NONE
Stage Scale Used:	DESC
Stage Majority, Percent:	NA

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale:	AMAPA W DESC
Stage Majority, Percent:	10
Stage Minimum, Percent:	4
Stage Maximum, Percent:	20
Height, Unit:	6 IN
Height Minimum, Maximum:	2 10
Density, Unit:	1 FT2

Application Equipment

	A
Appl. Equipment:	CO2 sprayer
Equipment Type:	ALTEVE
Nozzle Type:	See
Nozzle Size:	comment
Boom Length, Unit:	6.67 FT
Spray Volume, Unit:	15 GPA

Application Parameters for Liberty, Does it Really Matter?

Trial ID: 12-COL-SprayDemo
Location: Collinsville, IL
Investigator: Bryan Young

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code	AMAPA-HR 8-5-12 Control Percent 14 DA-A	AMAPA-HR 8-19-12 Control Percent 28 DA-A
	Pest Code										
	Crop Code										
	Rating Date									8-5-12	8-19-12
	Rating Type									Control	Control
	Rating Unit									Percent	Percent
	Rating Timing										
	Trt-Eval Interval									14 DA-A	28 DA-A
1	NONTREATED									0	0
2	XR 11004									97	93
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-6"W	A		
	AMS	100	SG	3	lb ai/a	3	lb/a	3-6"W	A		
3	AI 11004									93	90
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-6"W	A		
	AMS	100	SG	3	lb ai/a	3	lb/a	3-6"W	A		
4	XR 11004									95	90
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-6"W	A		
	CHOICE WEATHER MASTER	100	SL	0.25	% v/v	0.25	% v/v	3-6"W	A		
5	AI 11004									80	70
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-6"W	A		
	CHOICE WEATHER MASTER	100	SL	0.25	% v/v	0.25	% v/v	3-6"W	A		
6	XR 11004									98	85
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-6"W	A		
	AMS	100	SG	3	lb ai/a	3	lb/a	3-6"W	A		
	DIRECT	30	SL	0.0234	% v/v	3	oz/100 gal	3-6"W	A		
7	AI 11004									83	67
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-6"W	A		
	AMS	100	SG	3	lb ai/a	3	lb/a	3-6"W	A		
	DIRECT	30	SL	0.0234	% v/v	3	oz/100 gal	3-6"W	A		
8	XR 11004									93	80
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-6"W	A		
	AMS	100	SG	3	lb ai/a	3	lb/a	3-6"W	A		
	BORDER EG 250	100	SG	0.06	% w/w	8	oz/100 gal	3-6"W	A		
9	AI 11004									90	75
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-6"W	A		
	AMS	100	SG	3	lb ai/a	3	lb/a	3-6"W	A		
	BORDER EG 250	100	SG	0.06	% w/w	8	oz/100 gal	3-6"W	A		
10	XR 11004									95	90
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-6"W	A		
	AMS	100	SG	3	lb ai/a	3	lb/a	3-6"W	A		
	INTERLOCK	100	SL	0.208	% v/v	4	fl oz/a	3-6"W	A		
11	AI 11004									90	75
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-6"W	A		
	AMS	100	SG	3	lb ai/a	3	lb/a	3-6"W	A		
	INTERLOCK	100	SL	0.208	% v/v	4	fl oz/a	3-6"W	A		
12	XR 11004									93	83
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-6"W	A		
	DIRECT	30	SL	0.0234	% v/v	3	oz/100 gal	3-6"W	A		
	CHOICE WEATHER MASTER	100	SL	0.25	% v/v	0.25	% v/v	3-6"W	A		
13	AI 11004									75	60
	LIBERTY 280	2.34	EC	0.53	lb ai/a	29	fl oz/a	3-6"W	A		
	DIRECT	30	SL	0.0234	% v/v	3	oz/100 gal	3-6"W	A		
	CHOICE WEATHER MASTER	100	SL	0.25	% v/v	0.25	% v/v	3-6"W	A		
	LSD (P=.05)									.	.
	Standard Deviation									.	.
	CV									.	.

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Southern Illinois University

Application Parameters for Liberty, Does it Really Matter?

Trial ID: 12-COL-SprayDemo
Location: Collinsville, IL
Investigator: Bryan Young

Trial Comments

1. Protocol: SIU.
2. Ratings: WC at 14 and 28 DAT.
3. Spray nozzles are per treatment, see treatment list.
4. AMAPA-HR = Herbicide-resistant Palmer amaranth (glyphosate).
5. Not harvested (non-crop).

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